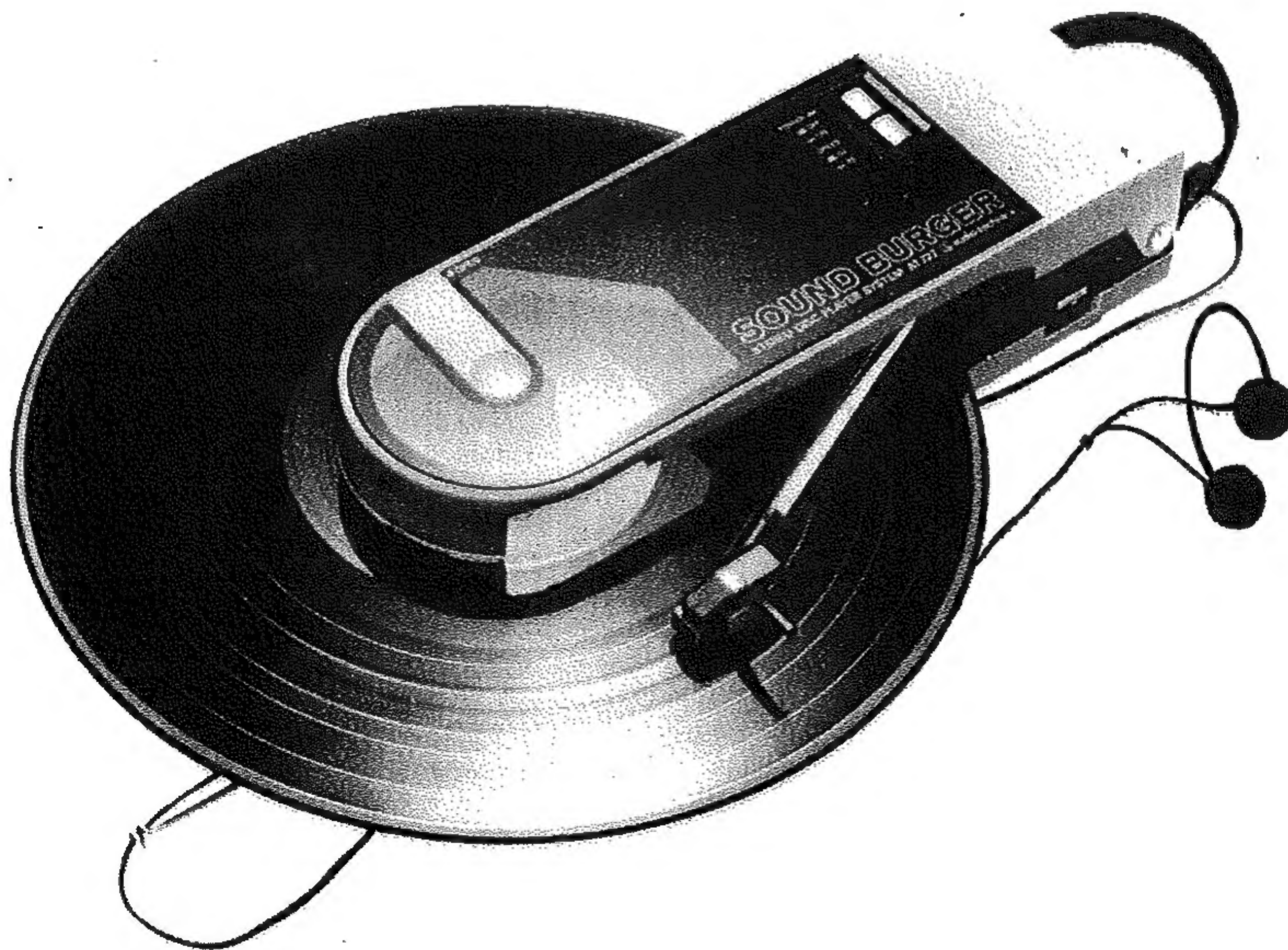


 **audio-technica**<sup>®</sup>

**SOUND BURGER AT727**

# **SERVICE MANUAL**



## SERVICE MANUAL -- Contents

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## 1. SPECIFICATIONS

### o Turntable Section

Platter : Alminium die-cast, 90mm diameter

Motor : Electronically-controlled DC motor

Drive System : Belt-drive

Drive Speed : 2-speed (33 1/3 & 45 rpm)

Wow & Flutter : less than 0.2%

S/N Ratio : greater than 50dB

### o Pickup Section

Tonearm : Dynamically balanced type

Cartridge : Dual-magnet type

VTF : 2.0g

Output Voltage : 4.5mV(1kHz,5cm/sec.)

Replacement Stylus : ATN-103

### o Amplifier Section

Frequency Response : 30 to 25,000Hz

RIAA Deviation :  $\pm 1.0$ dB

Maximum Output : 110mV to LINE OUT; 36mW + 36mW(EIAJ/DC) to  
stereophones

Power Supply Voltage : 4.5V DC

Battery Current : 200mA or less(Three SUM-2 batteries)

Battery Life : 12 hours, continuous use

### o Dimensions & Weight

Dimensions : 290L x 99W x 65H (mm) (not including carrying  
strap or small projections)

Weight : 1.2kg(not including bateeries)

### o Stereophones (ATH-0.15F)

Frequency Response : 35 to 20,000Hz

Impedance : 40 ohms

Sensitivity : 102dB(SPL 1kHz, 0dB=0.0002 $\mu$ bar/mW)

Max. Input : 250mW(200Hz for 1min.)

Weight : 30g(not including cord)

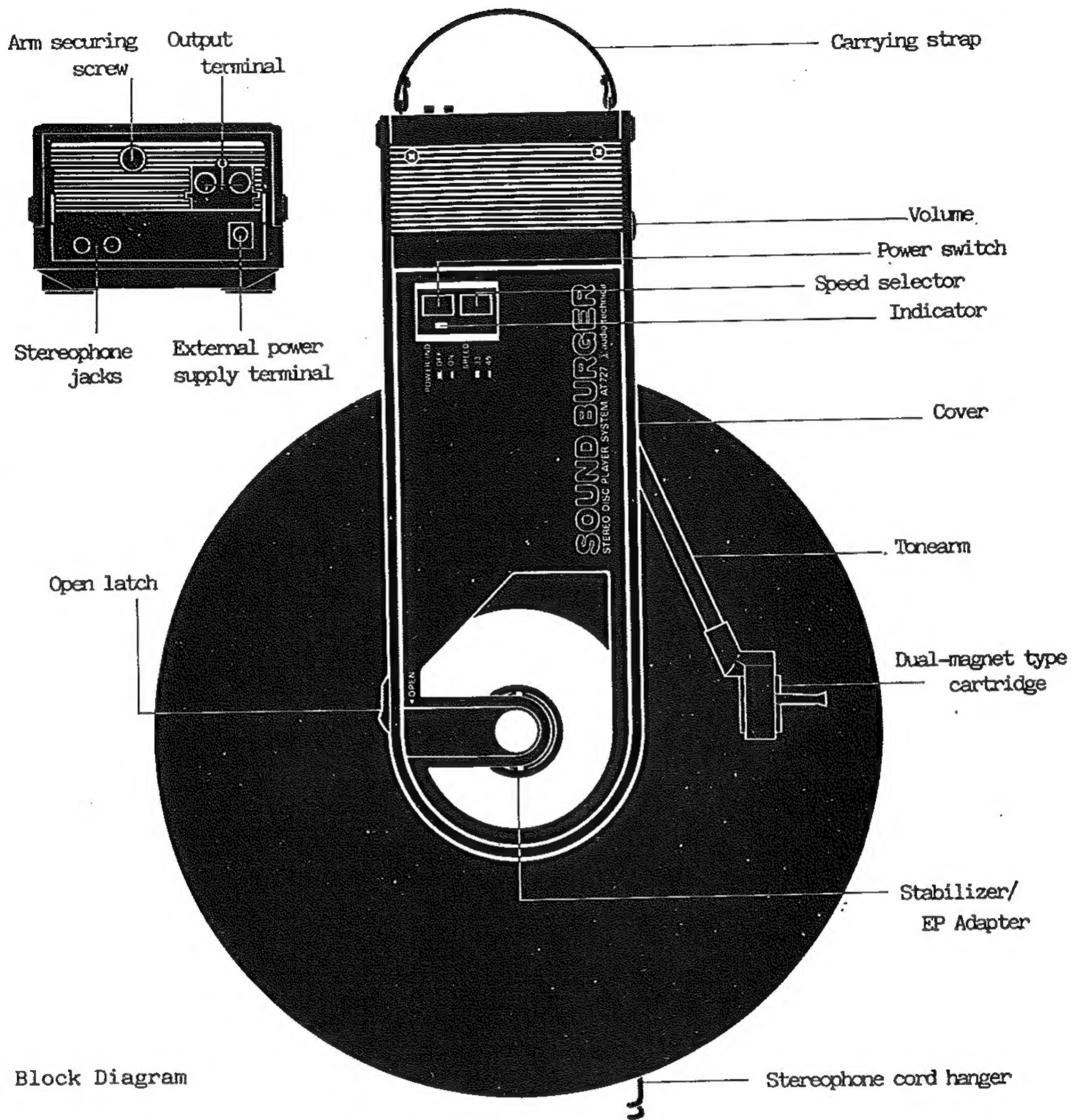
Cord : 2m, with 3.5mm mini stereo plug

o Accessories Provided

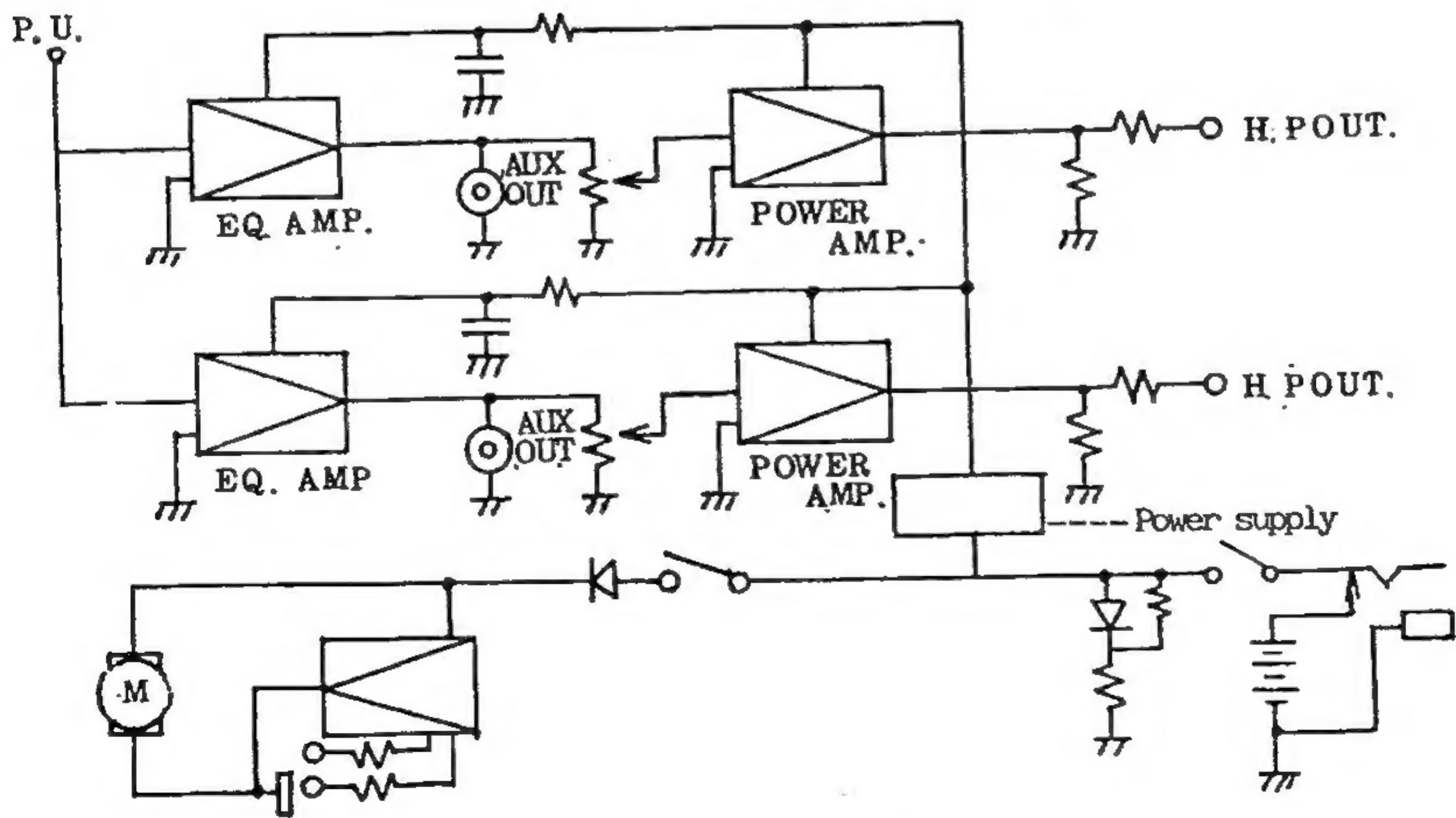
Stabilizer/EP Adapter.....	1
Battery(SUM-2).....	3
Output Cable.....	1
<del>Carrying Pouch.....</del>	<del>1</del>
Instruction Manual.....	1



2. Parts nomenclature



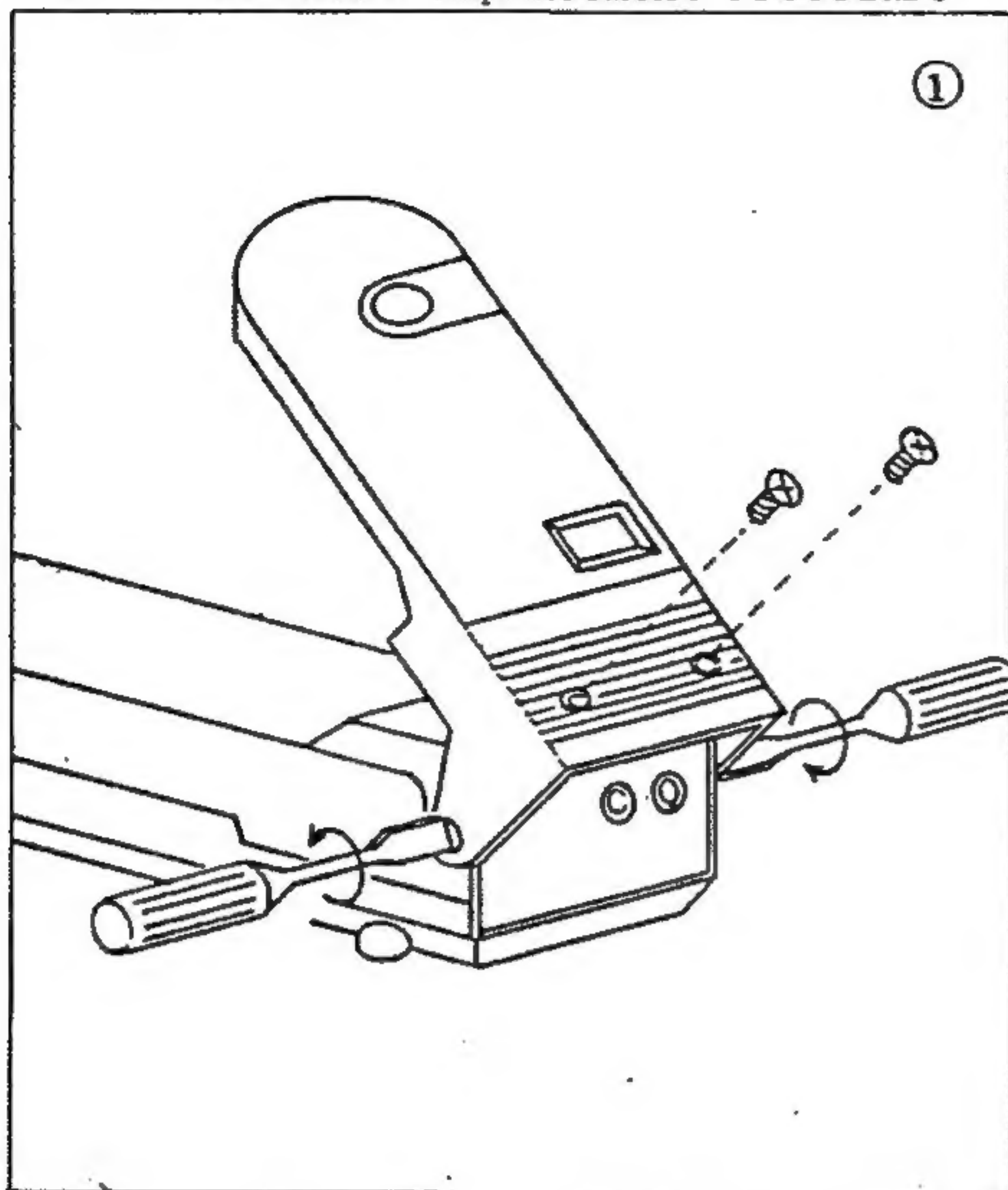
3. Block Diagram



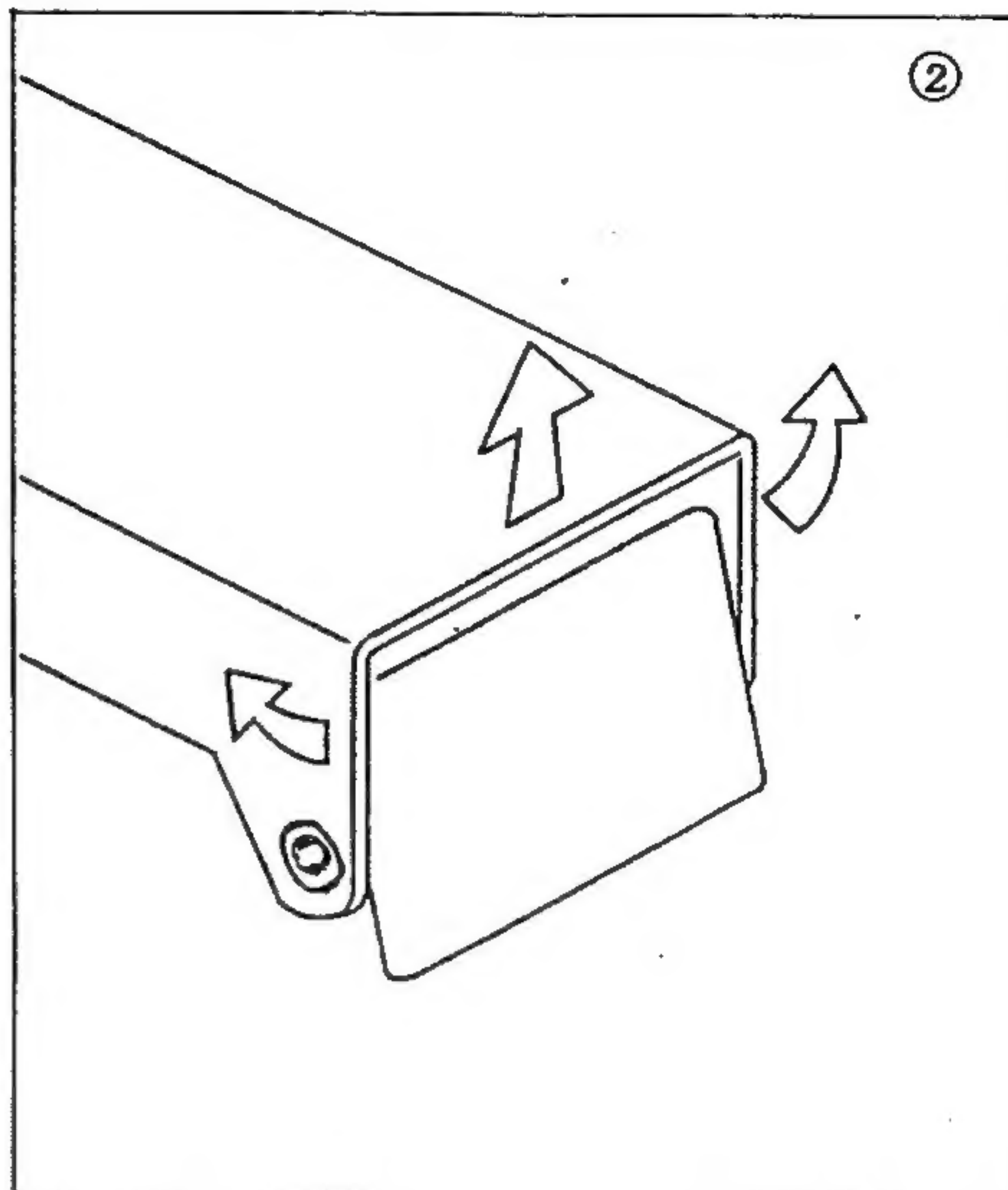


## 4. Body Disassembly Procedure

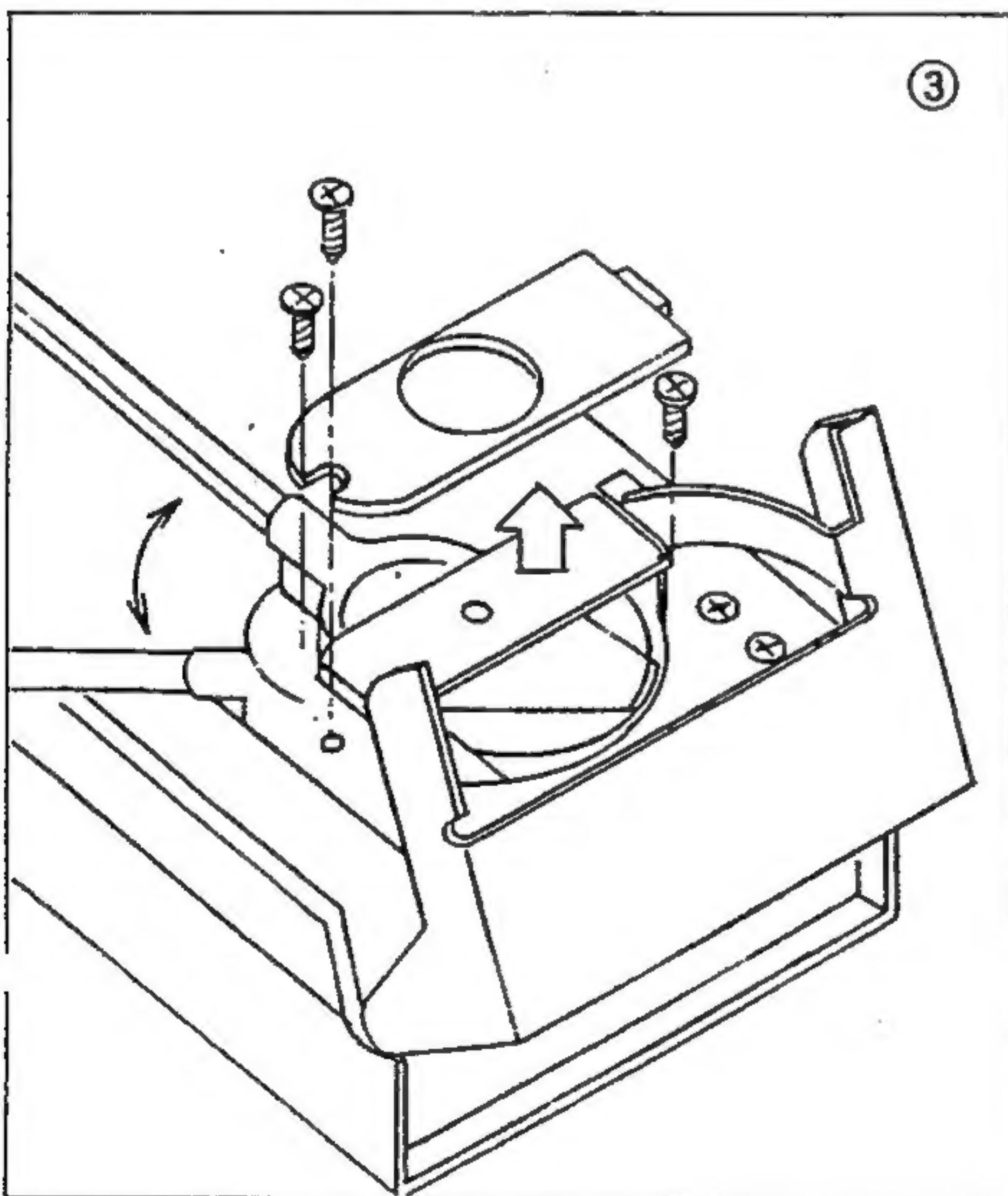
### 4 - 1 PC Board Replacement Procedure



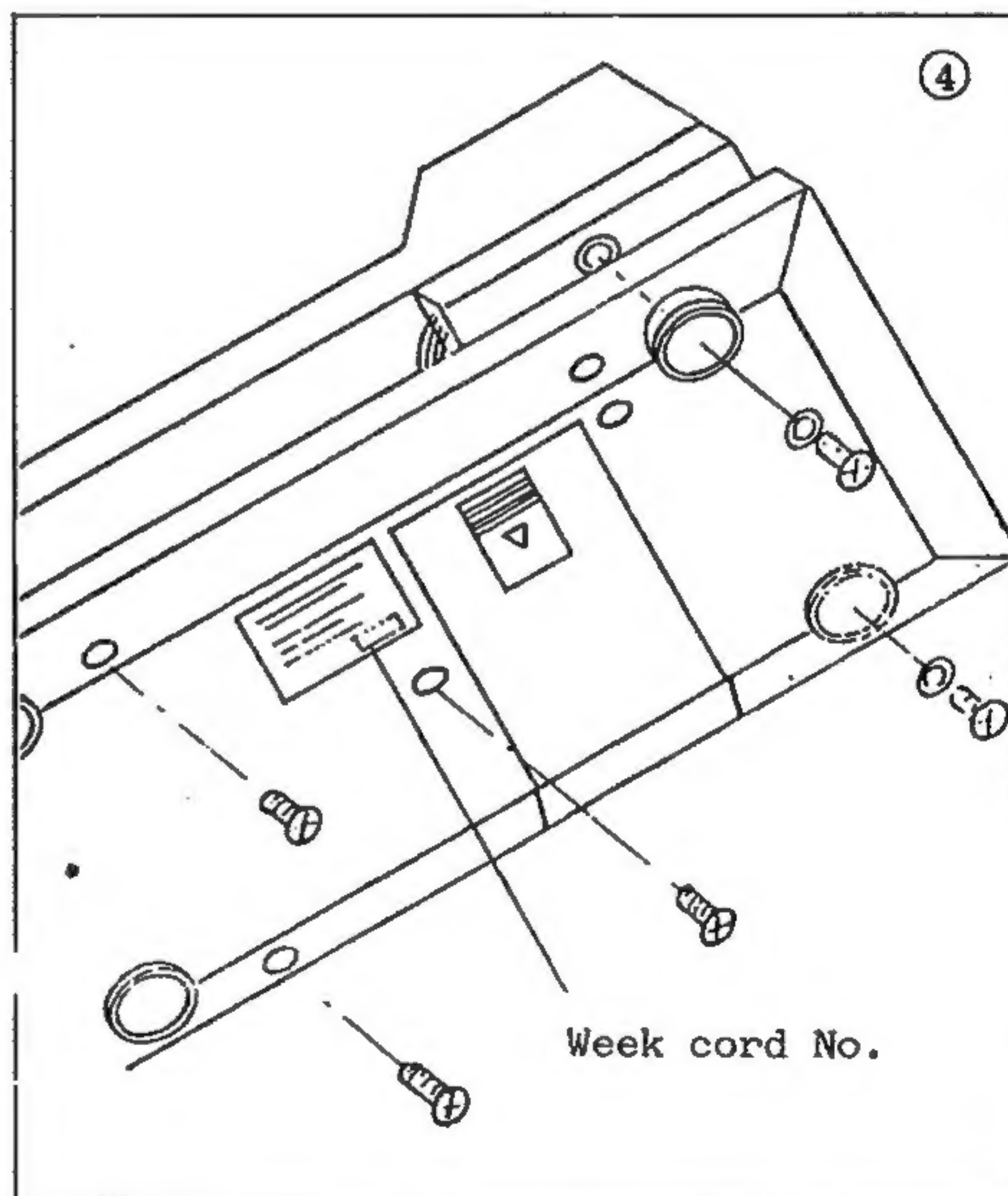
Remove the two screws on top of the cover. Use two screwdrivers(-) to remove the hinge screws from the shaft. If the one screw is remained, Keep the shaft by putting the screwdriver into the slot of the shaft and remove the other screw.



Spread the skirts at the base of the cover, lifting it up to remove.

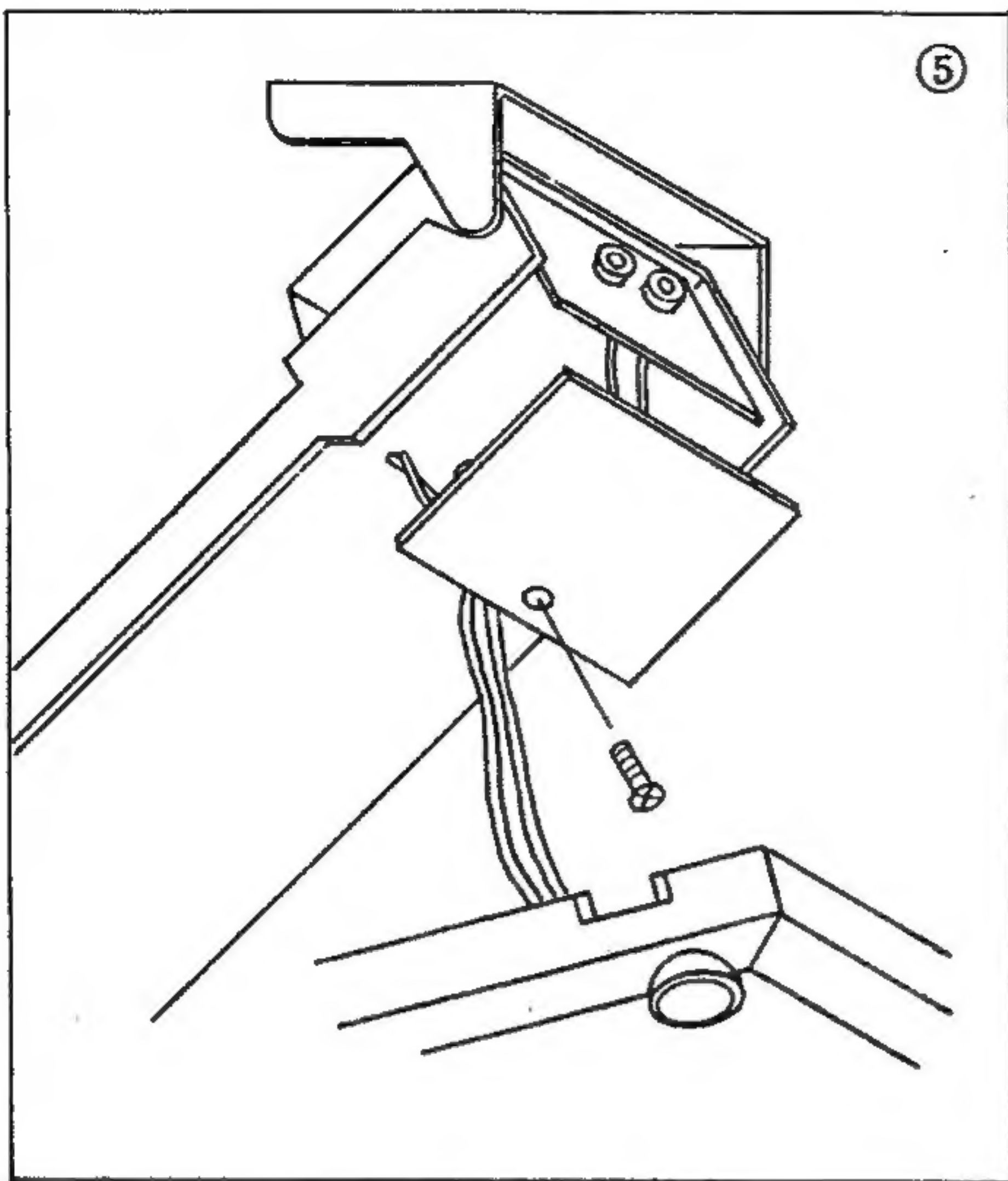


Remove the tonearm base cap, then loosen the two screws at the arm base and lift out the tonearm hanger. (See the tonearm replacement procedure on page 6.)

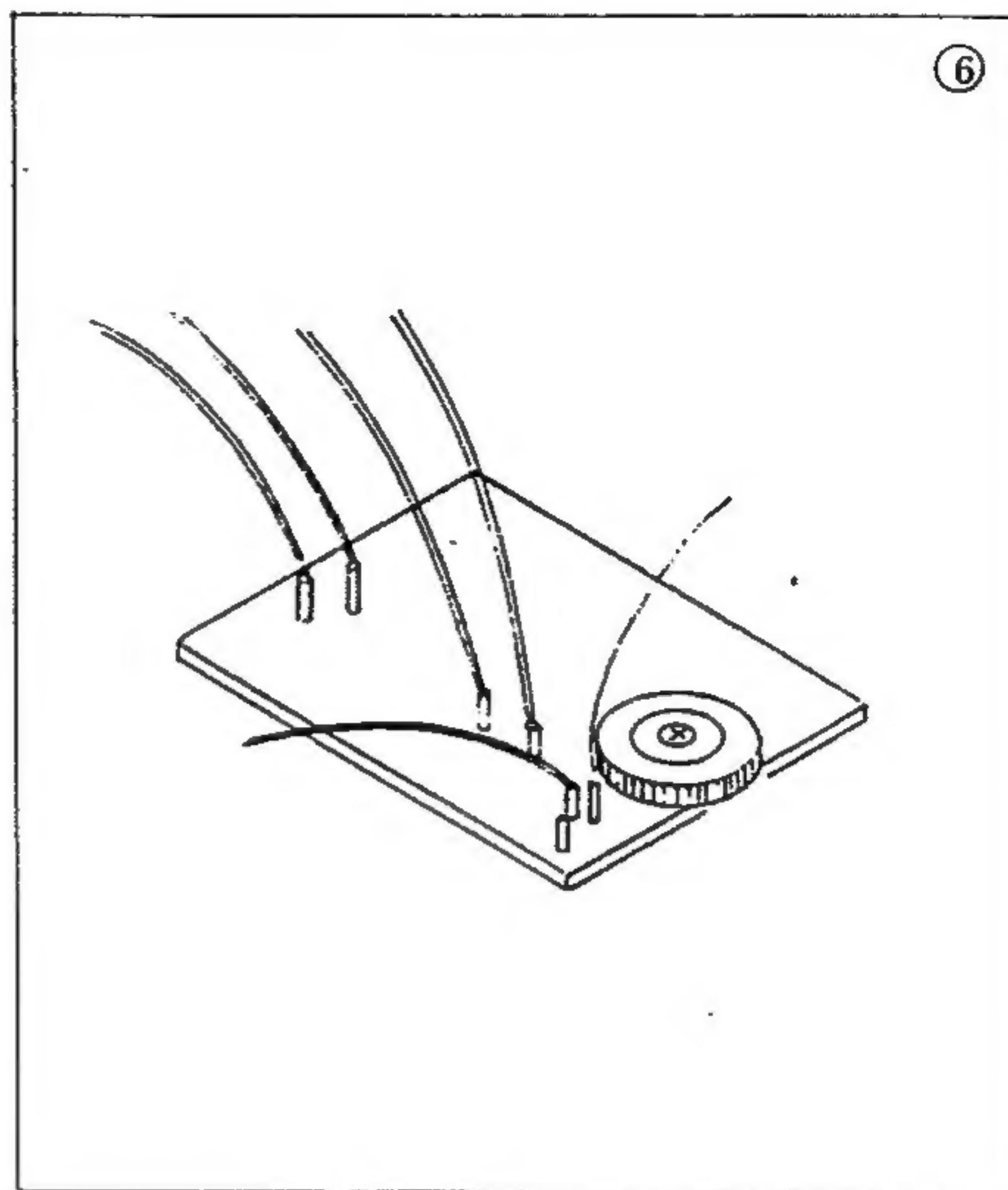


Remove the five screws on the lower part of the chassis to separate the body from the chassis. (Be careful while doing this; there are wires connecting the two units.)



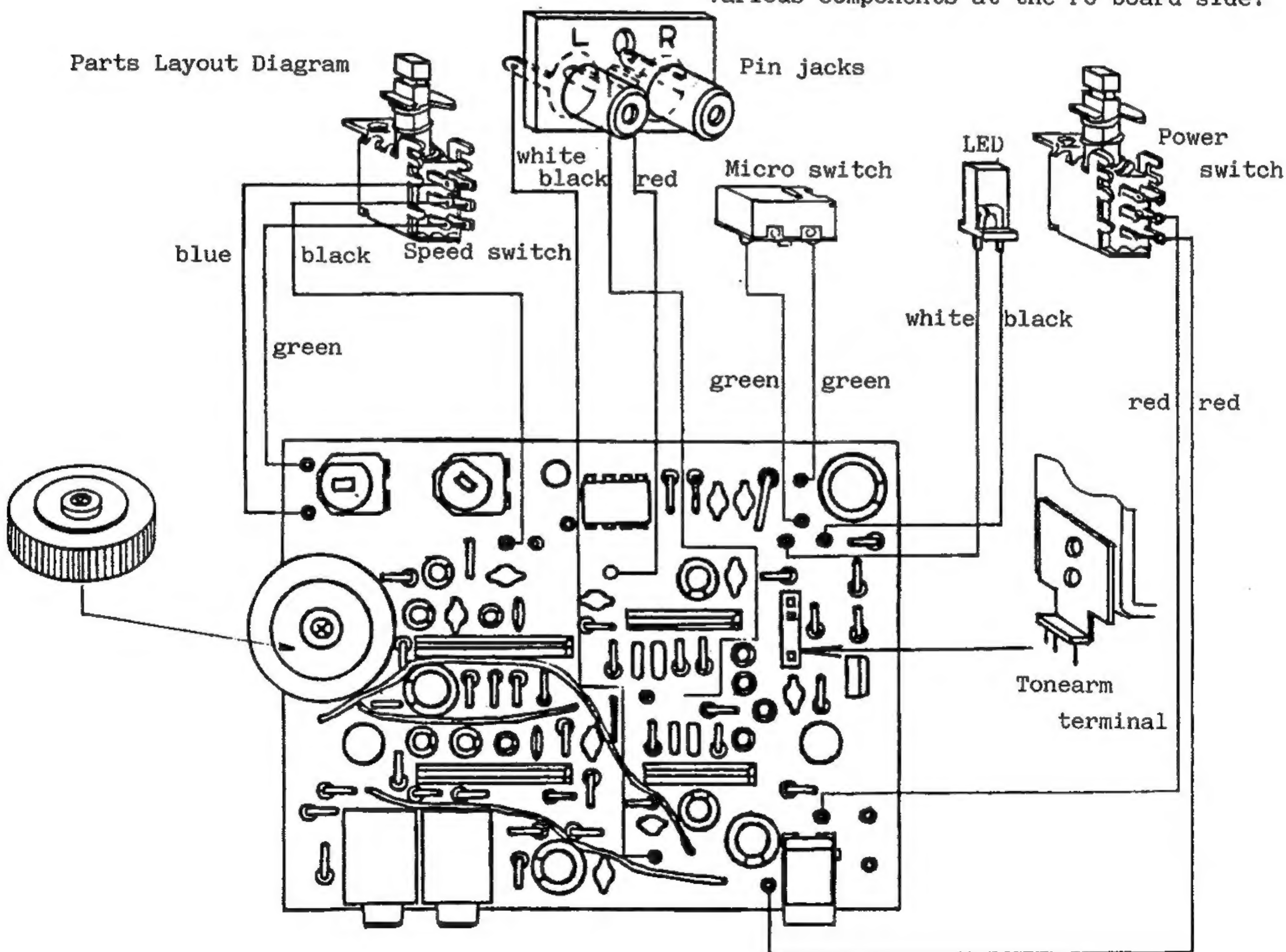


Remove the PCB ass'y from the body.

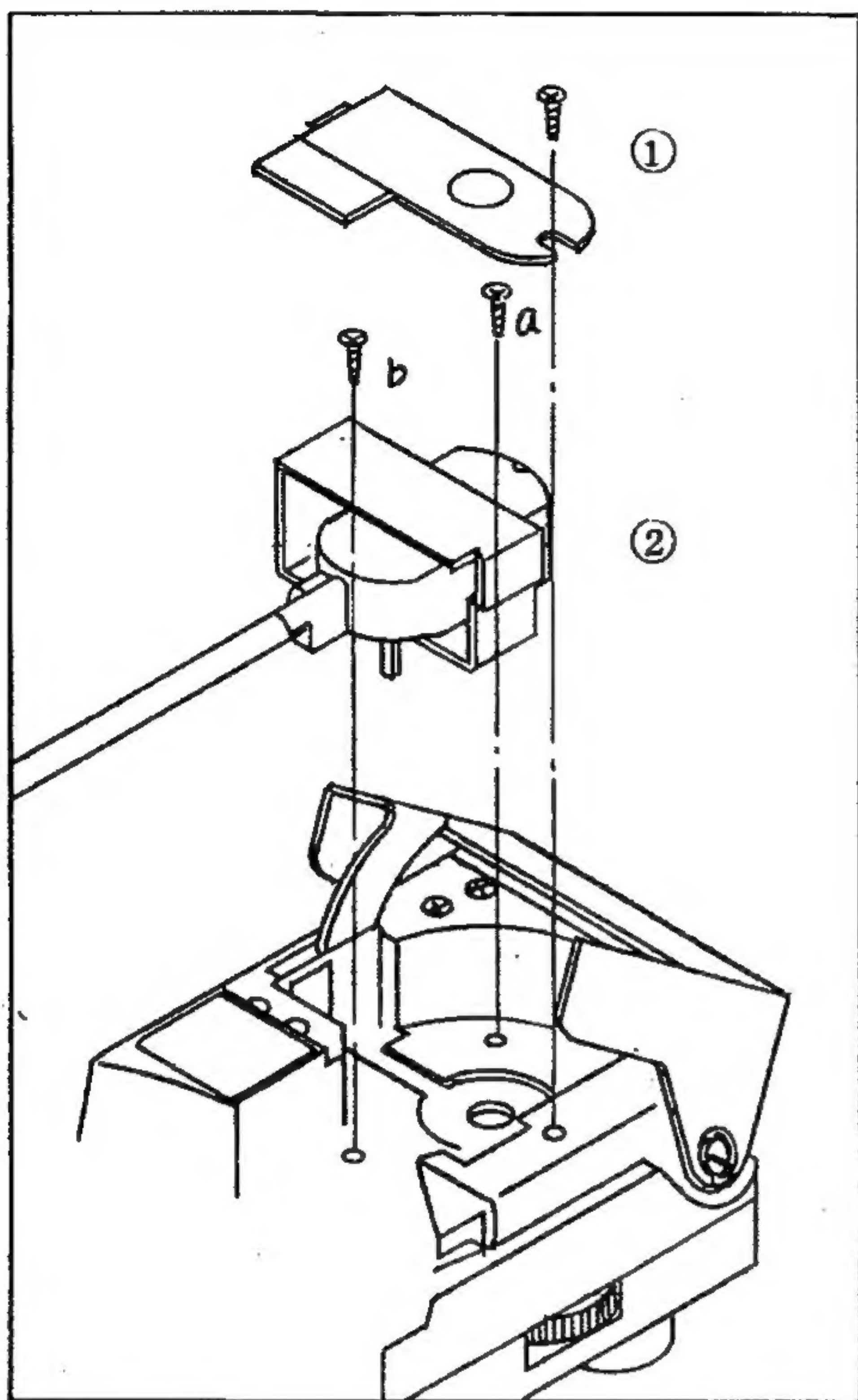


Disconnect the wires running to the various components at the PC board side.

Parts Layout Diagram



## 4 - 2. Tonearm Replacement Procedure



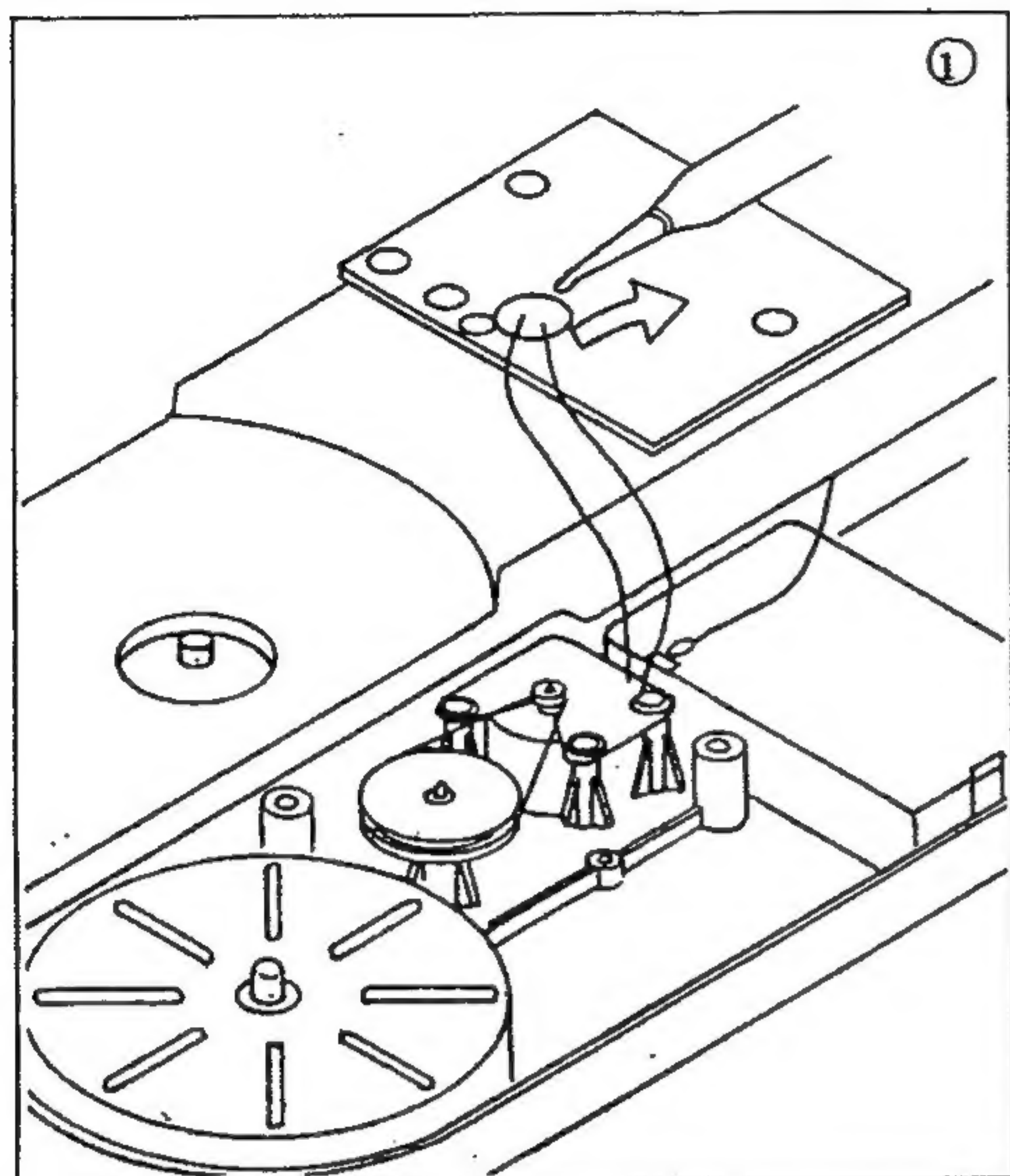
1. Remove the cover prior to attempting to remove the tonearm. (This procedure is covered on page 4.) Remove the tonearm base cap securing screw, and take off the cap.
2. Remove the two screws\* securing the tonearm hanger, then lift straight up on the tonearm base to remove the hanger.
3. To place the tonearm, follow the reverse procedure.

\* Loosening the tonearm hanger securing screws...

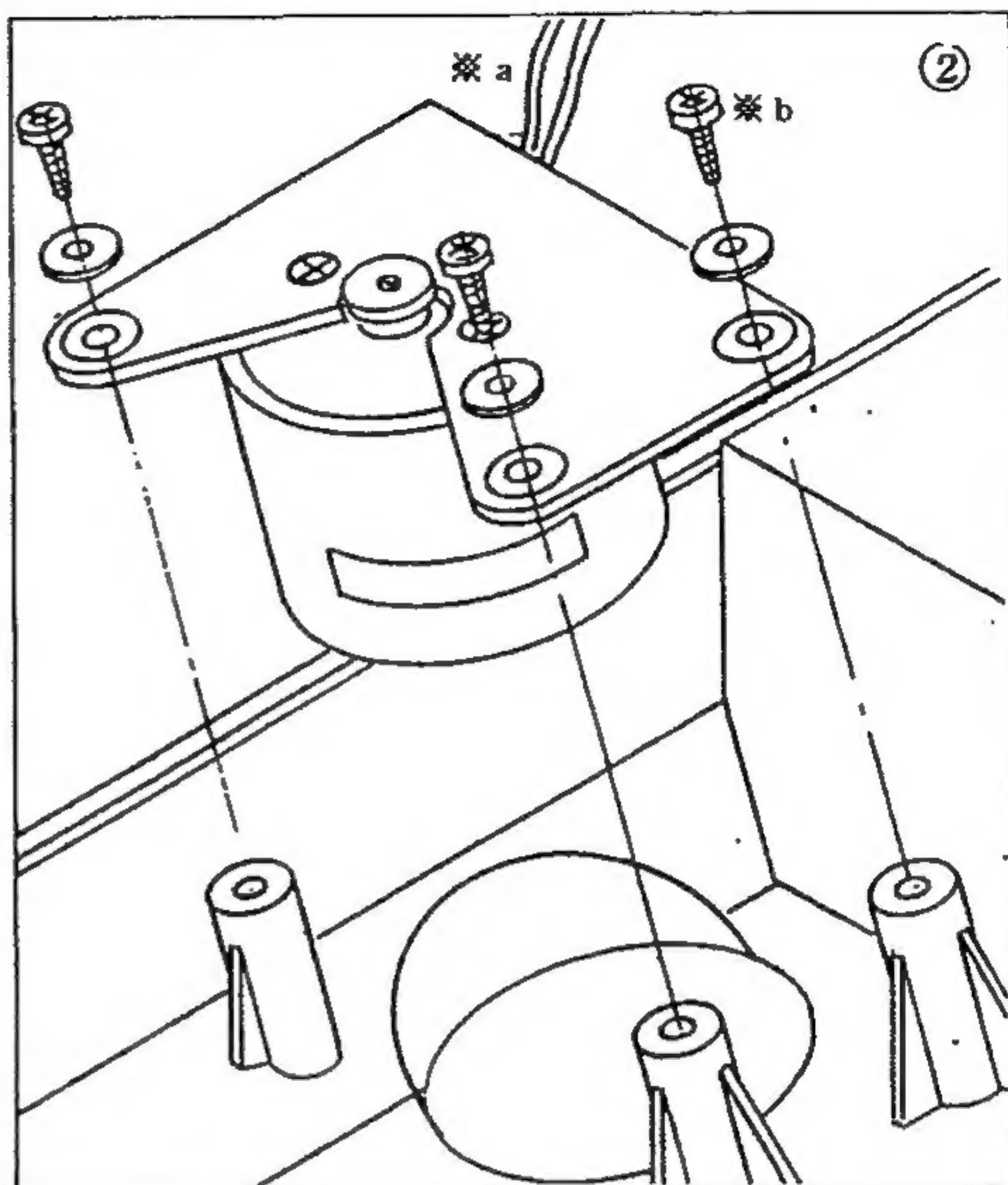
Screw a : Remove with tonearm in stored position(centered).

Screw b : Remove with tonearm in arm rest position(outside).





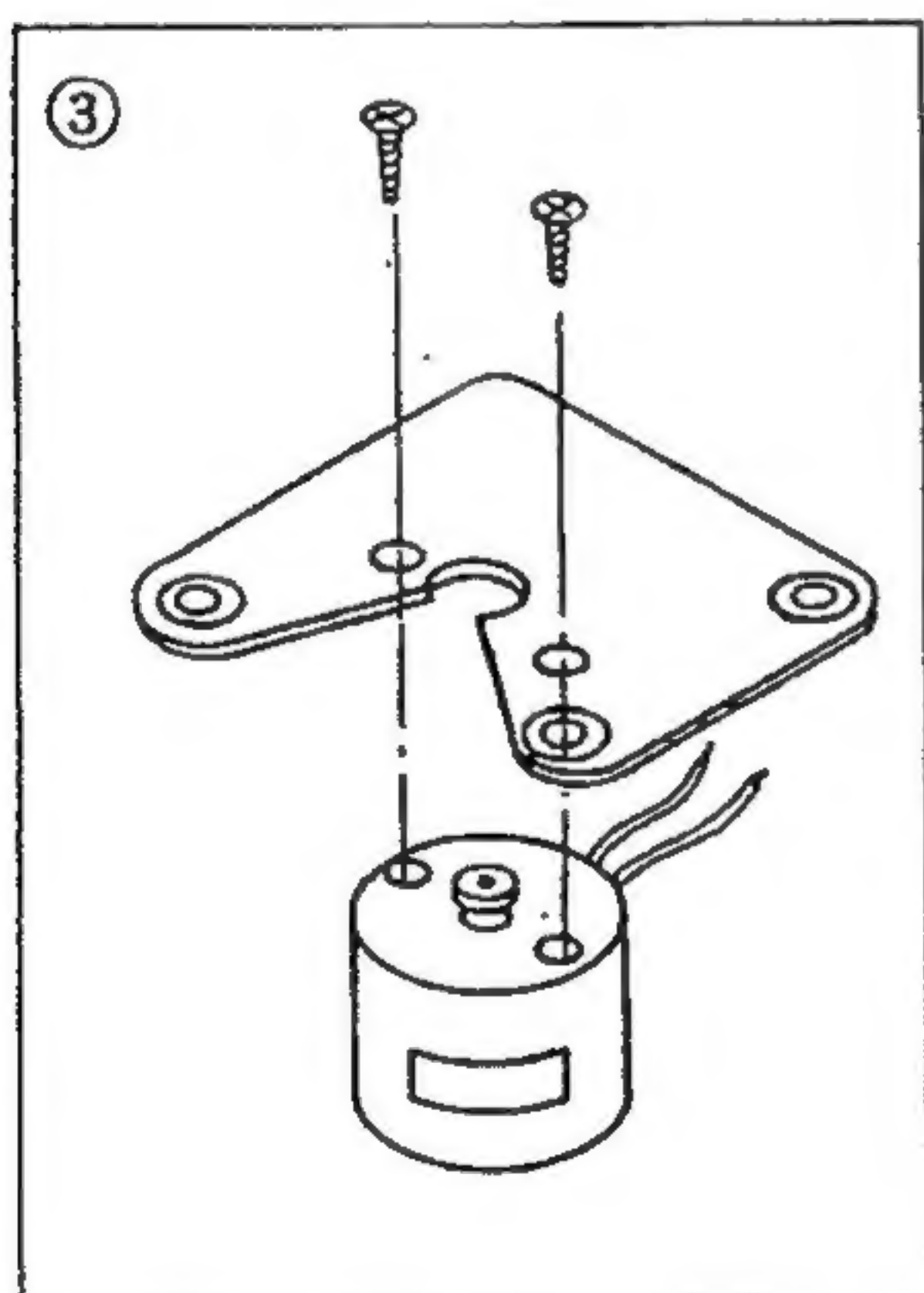
Separate the body from the chassis, then unsolder the wires to the motor. (See page 4, diagram 4 for separating the body from the chassis.)



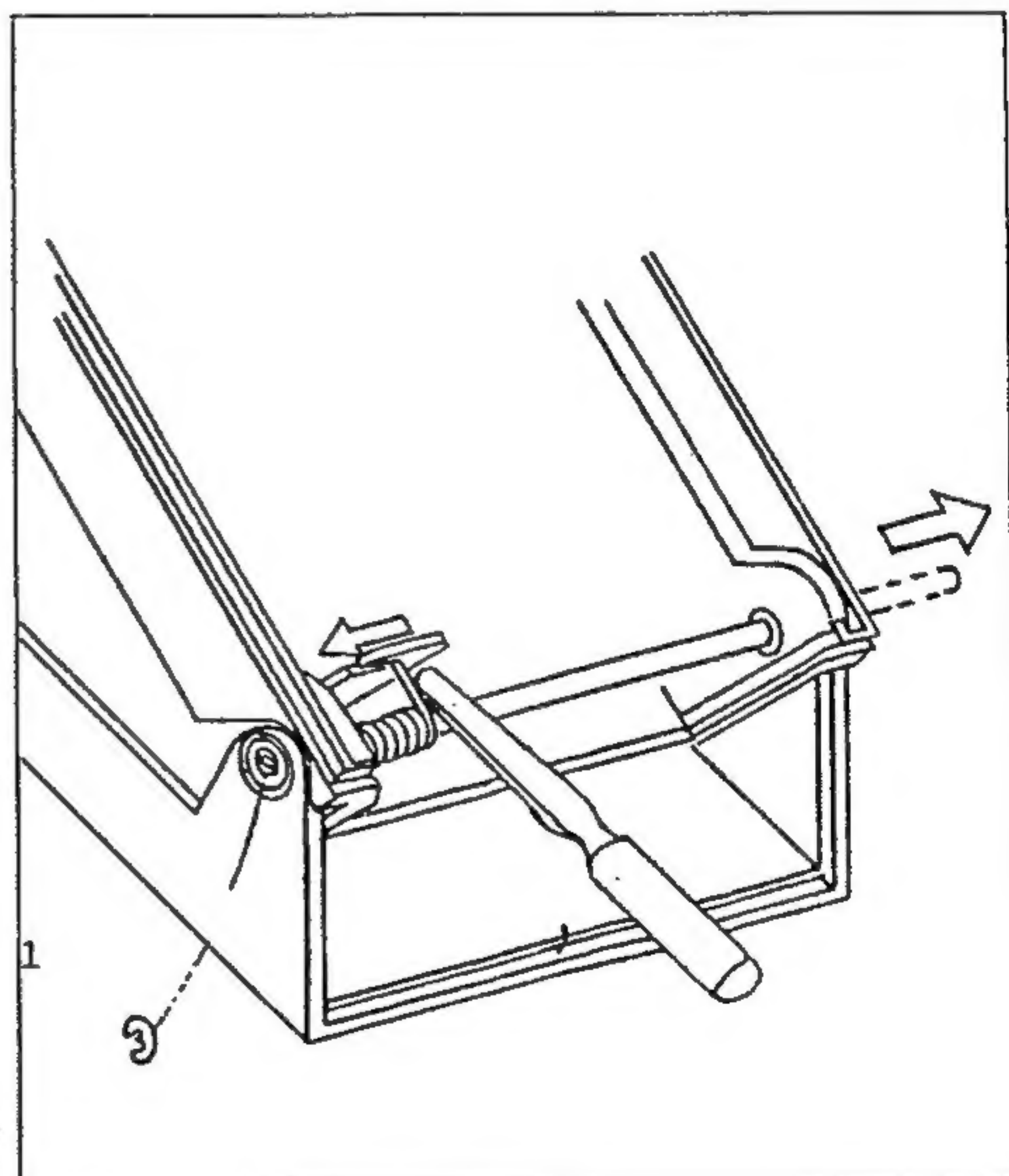
Remove the motor ass'y from the chassis. When reassemble the motor:

- \*a : Motor wires leading back to neg(-) battery terminal.
- \*b : Do not overtighten the three chassis screws.

Body Disassembly Procedure



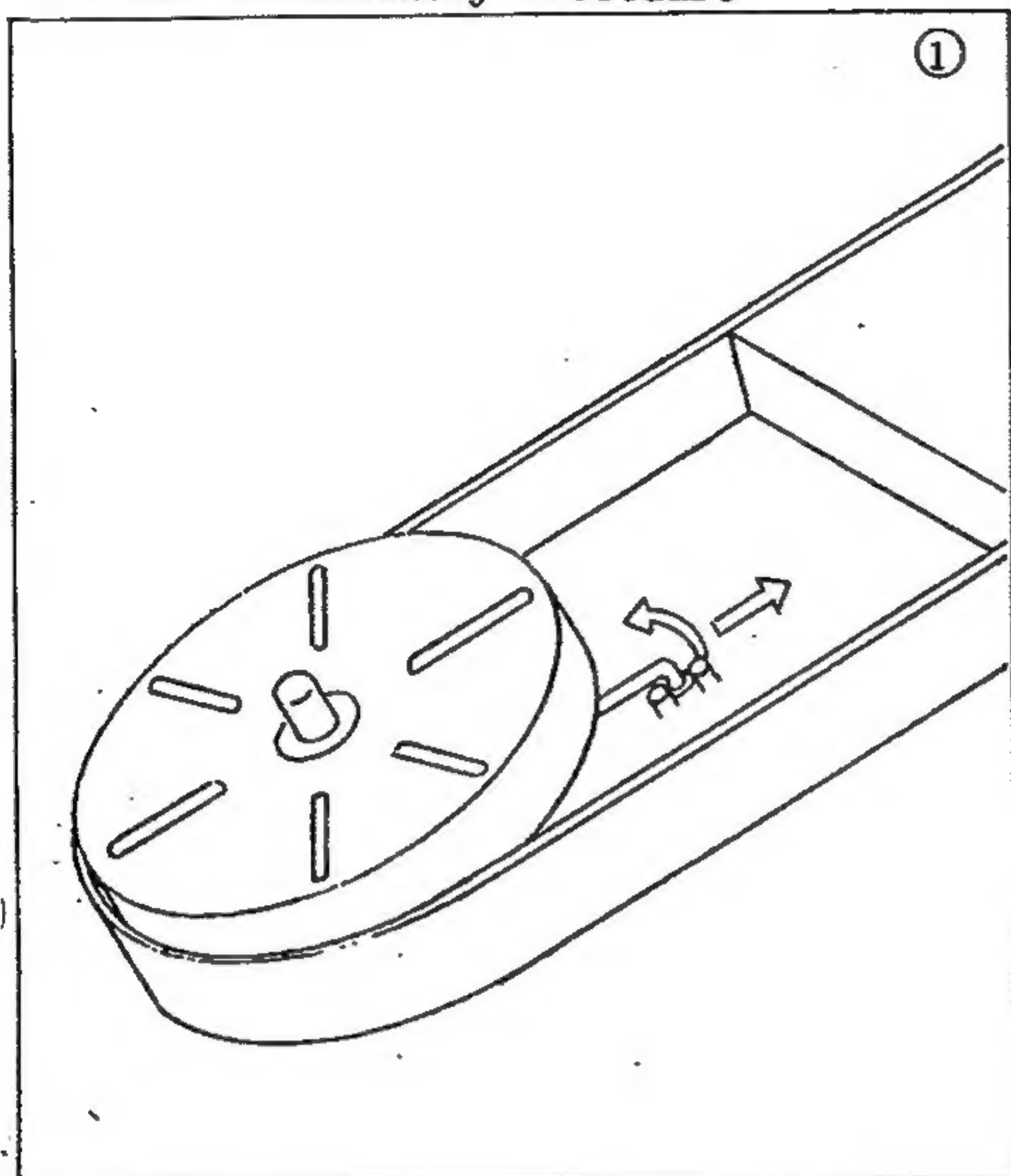
Remove the motor from its mounting plate. After the motor has been replaced, reassemble to the chassis following the reverse procedure.



Take the hinge spring off its hook, remove the E-ring on one side of the hinge shaft and slide out the shaft.



## Platter Disassembly Procedure

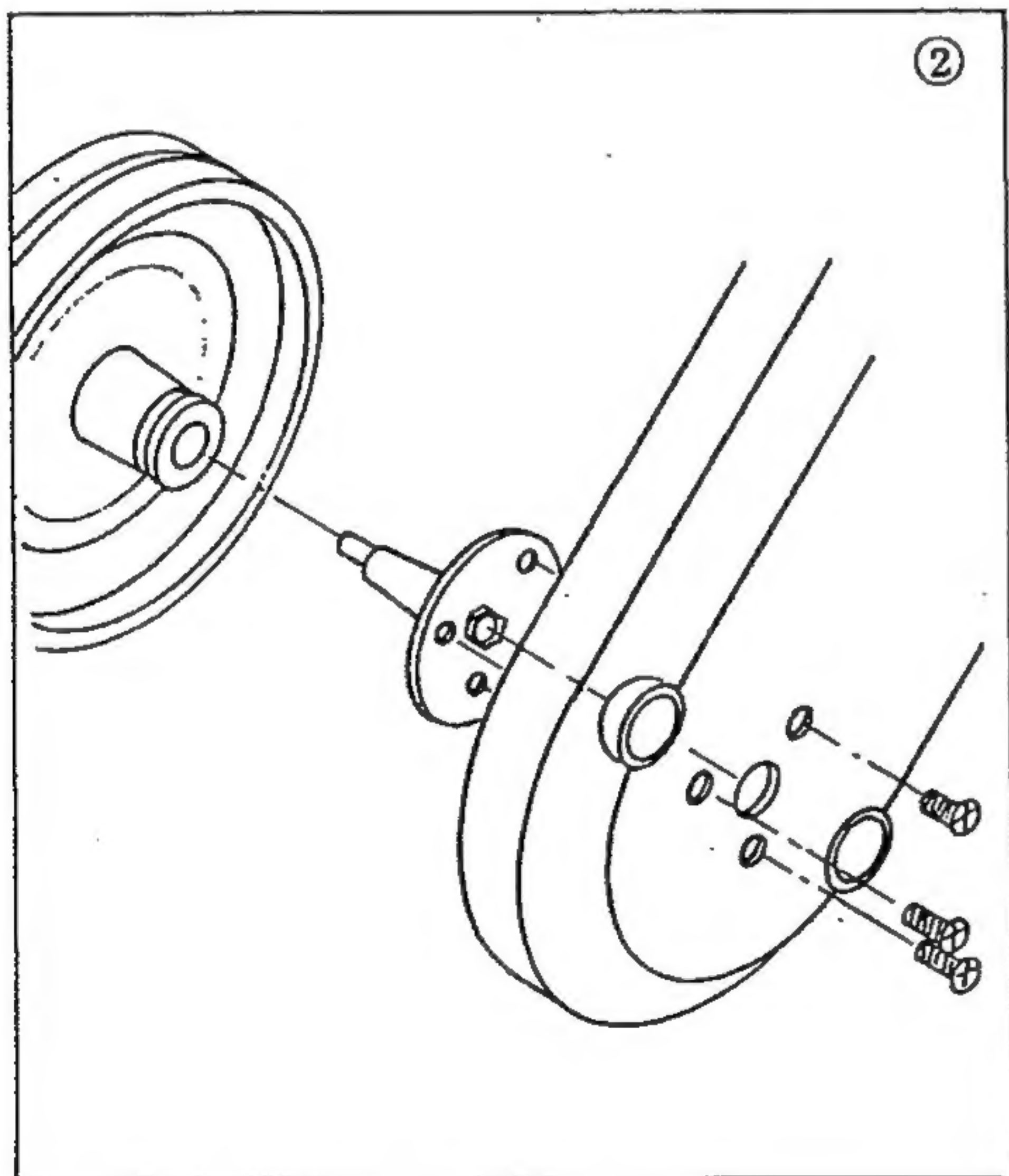


Lift up the lockpin and pull it out from the rear.

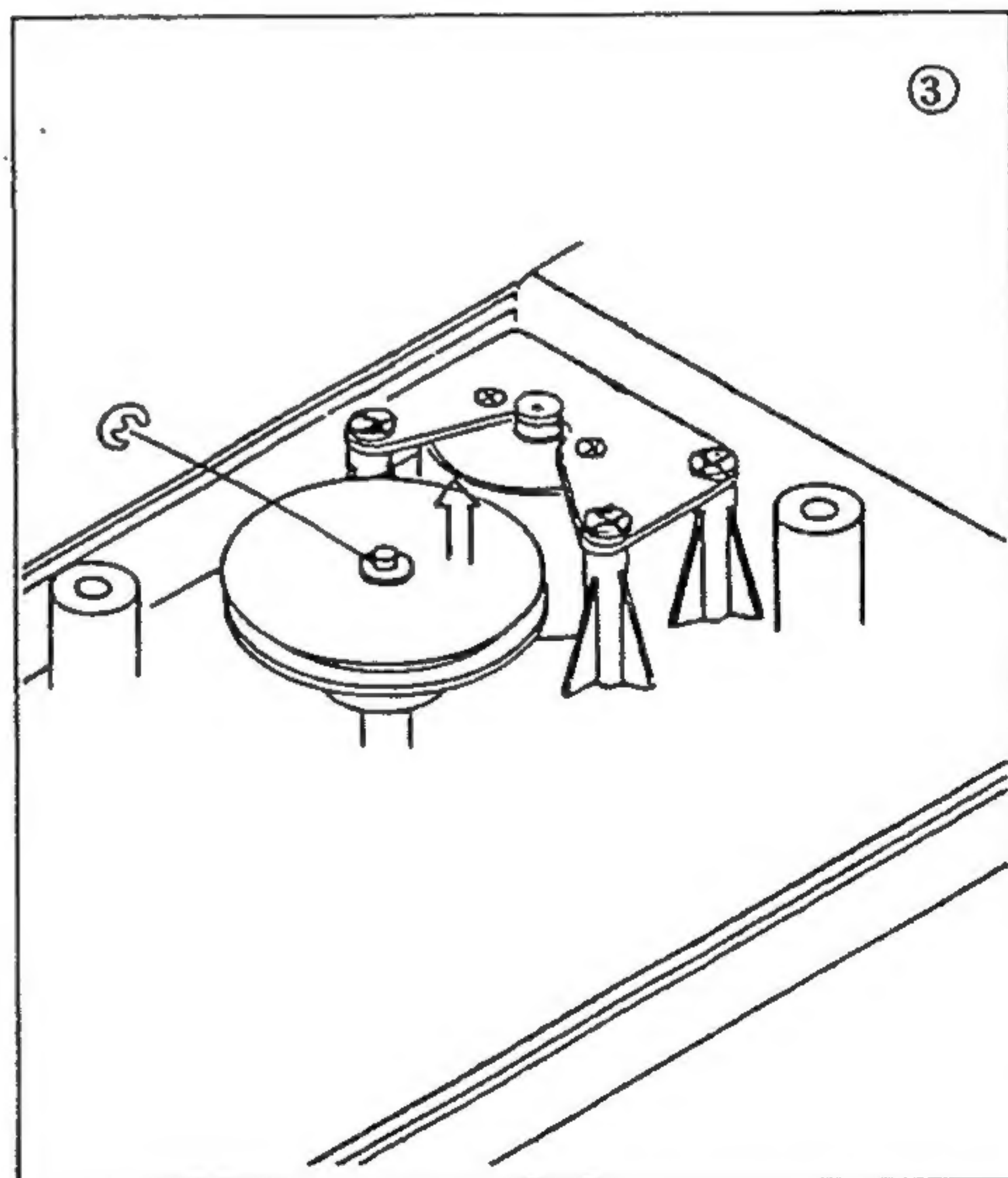
Initially, remove the two drive-belts from the pulleys.

Scrape off the cement securing the lockpin before lifting it up. The platter can be removed by lifting it straight up after the lockpin has been removed.

\* Be careful not to pull the center spindle loose when lifting platter off.



After the three screws on the bottom of the chassis have been removed, the center spindle ass'y can be removed from the chassis.



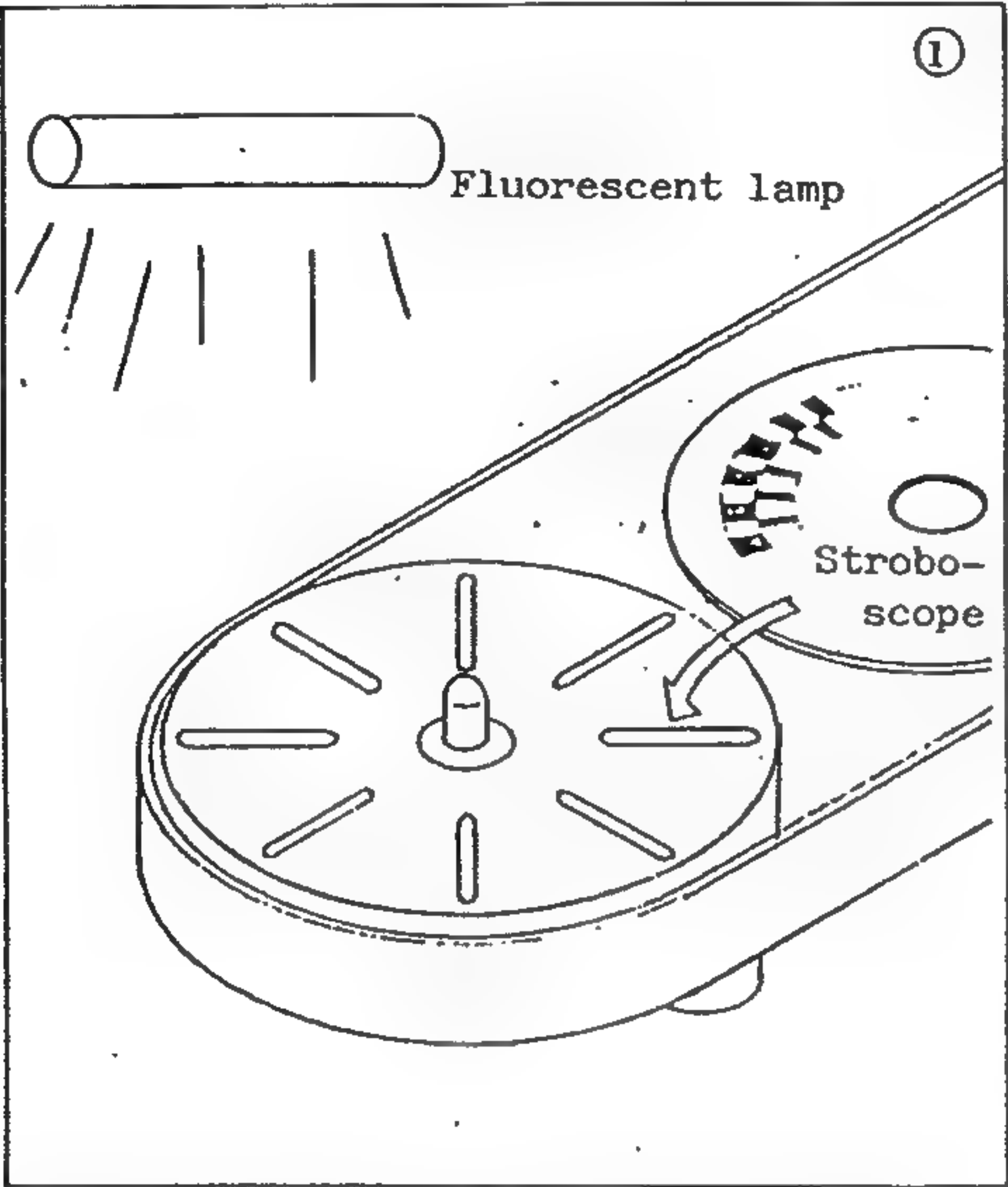
Remove the E-ring securing the pulley, and lift the pulley off its shaft.

\* Be careful not to do score the pulley shaft while removing the E-ring and the pulley.

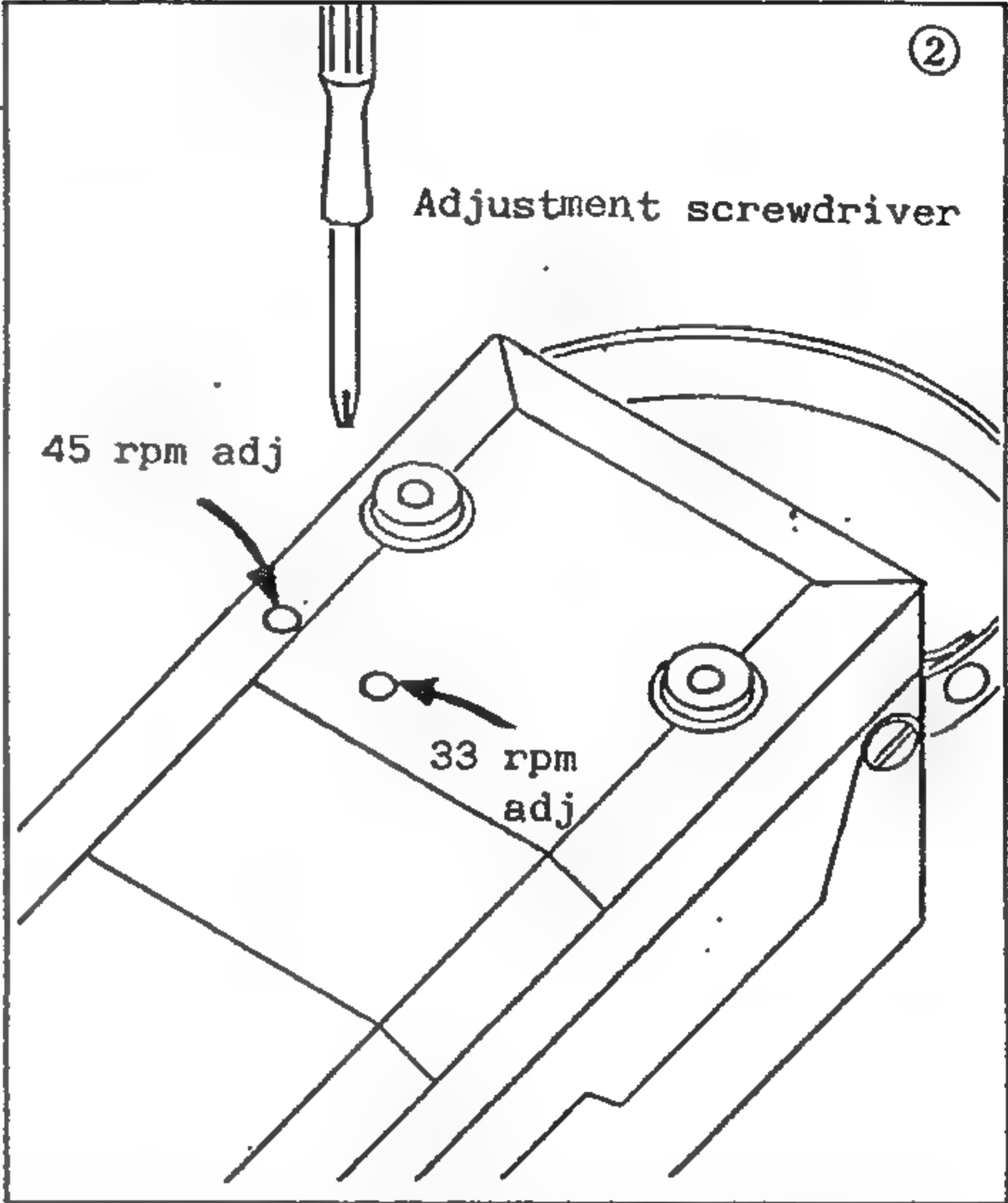


5. Check Procedure

5 - 1 Turntable Speed Adjustment Procedure

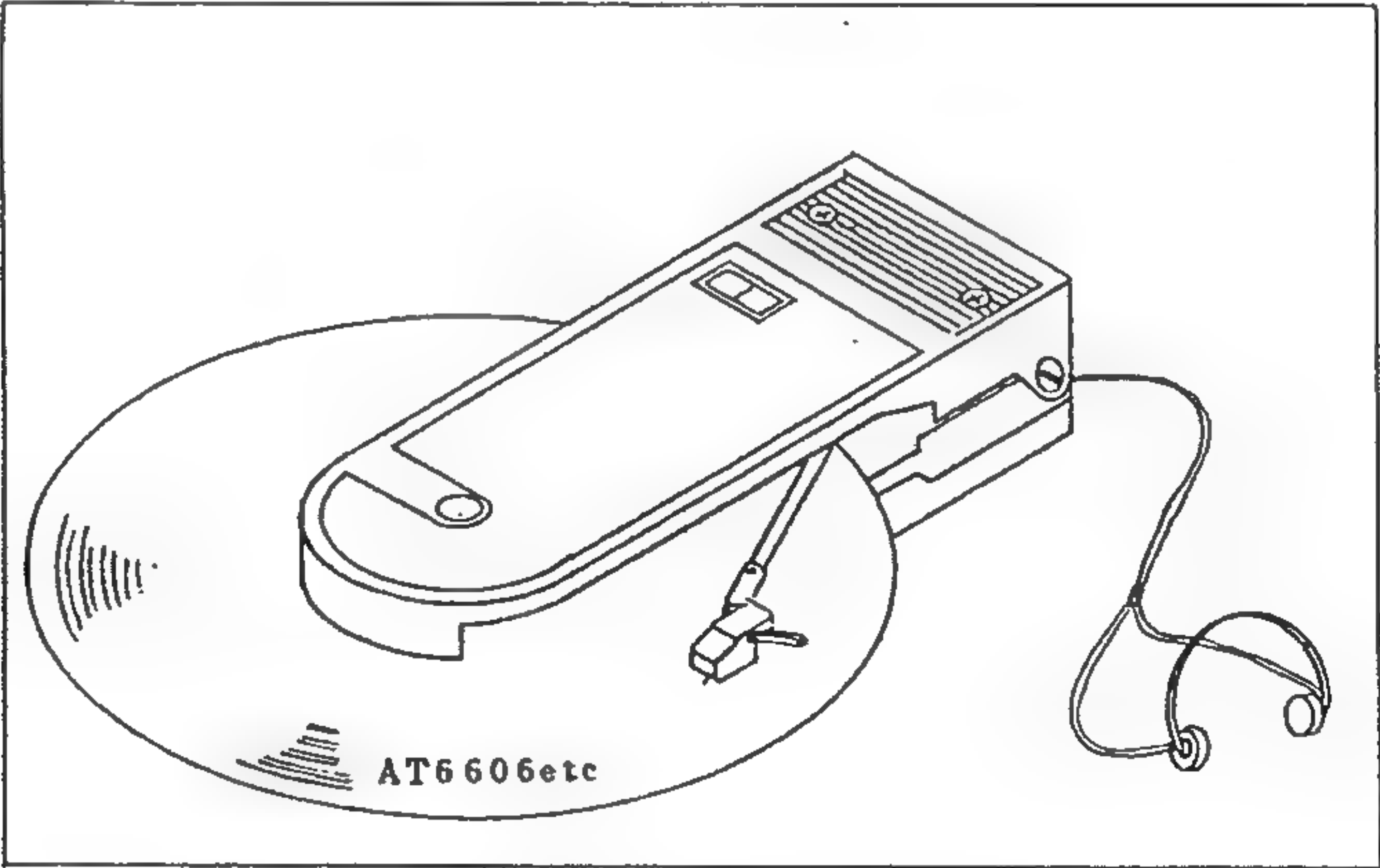


Place the strobo-scope on the platter and illuminate with fluorescent lamp.



Use the screwdriver to adjust the 33 1/3 and 45 rpm adjusting volume until the strobo-scope stripes appear to be stationary. (The 33 1/3 adj is the inside one; 45 adj is the outside one.)

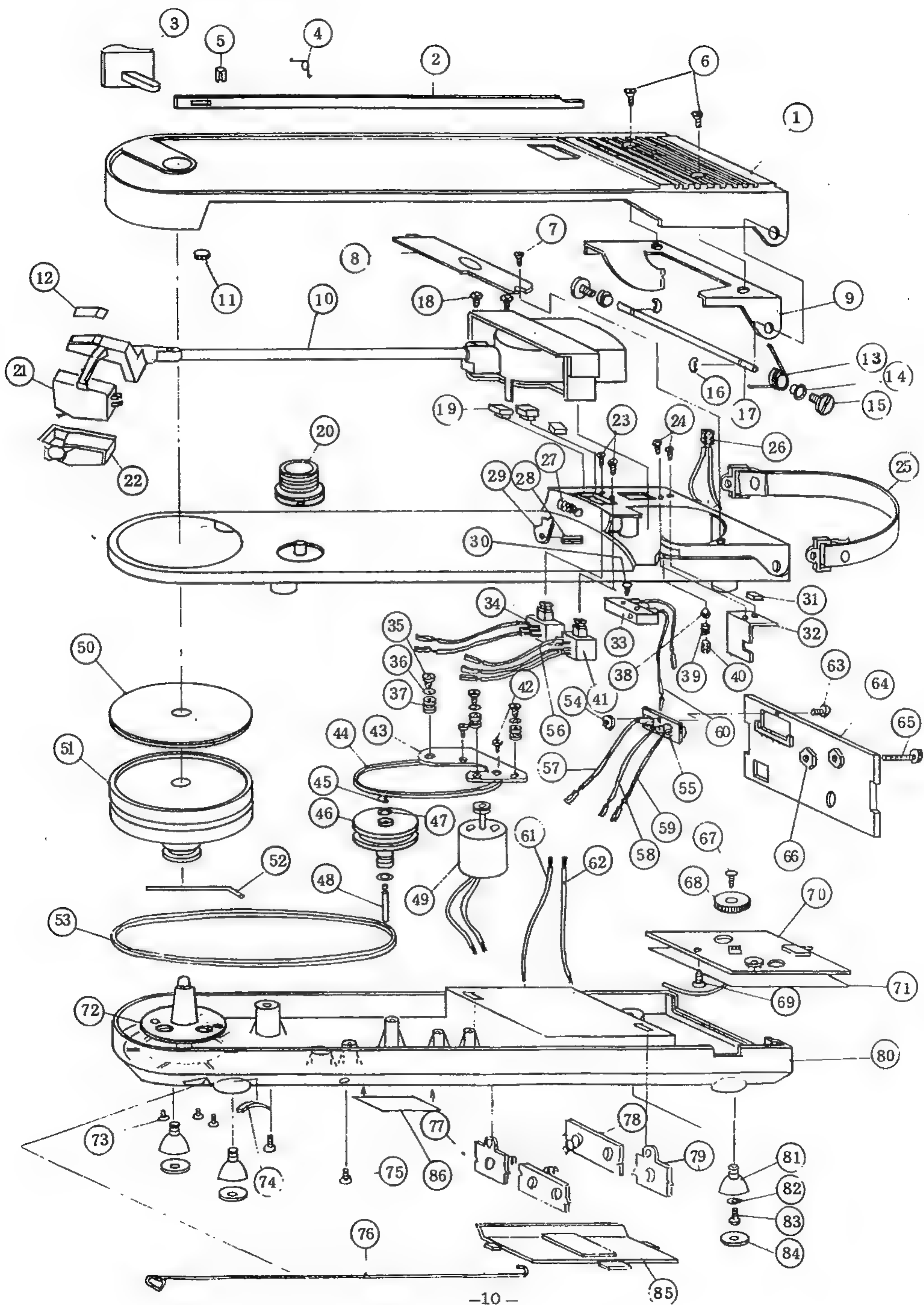
5 - 2 Audio Output Check



Using AT6606 (or any other test record with a single-frequency signal), make sure that sound output is of sufficient volume. For a 1kHz signal, maximum volume should approach being painful. (The VR Should be adjusted for MAX output.)



# 6. Exploded View Diagram





## PARTS LIST

AT-727

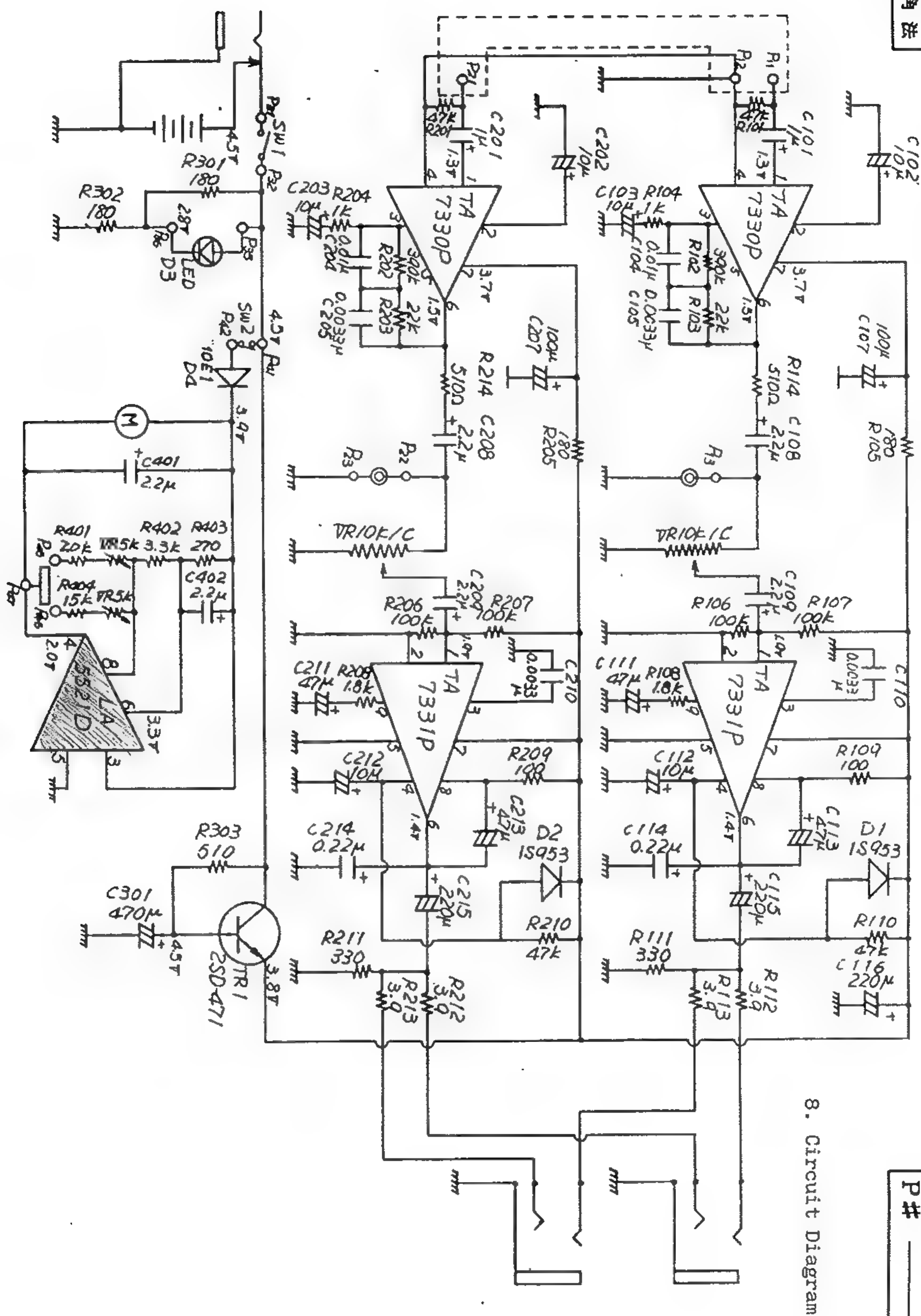
No,	P#	NAME	Q,ty.
1		COVER	1
2	7500340	SLIDE PLATE	1
3	7500320	OPEN LATCH	1
4	7500350	COUNTER SPRING	1
5	0540320	FINE PIN	1
6	8200670	SCREW	2
7	7300270	SELF TAPPING SCREW	1
8	7300170	HINGE COVER	1
9	7500440	SUB CHASSIS	1
10	7200020	ARM ASSY	1
11	7500290	SPINDLE DAMPER	1
12	7300160	CLOSURE	1
13	7500210	HINGE SPRING	1
14	7500190	HINGE BUSH	2
15	7500180	HINGE SCREW	2
16	0670710	E RING	2
17	7500220	HINGE SHAFT	1
18	7300240	SELF TAPPING SCREW	2
19	7500110	SWITCH KNOB	2
20	7500240	STABILIZER	1
21	1502140	SEALD CASE ASSY	1
22	2506080	REPLACEMENT STYLUS	1
23	7500360	SCREW	2
24	8160490	SCREW	1
25	7200120	CARRING STRAP	1
26	7200390	LED ASSY	1
27	7500140	SPRING	1
28	0540320	FINE PIN	1
29	7500120	LOCK PLATE	1
30	7400490	SELF TAPPING SCREW	1
31	7500300	COVER DAMPER	2
32	7500420	HOCK	1
33	7200380	MICRO SWITCH ASSY	1
34	7200400	POWER SWITCH ASSY	1
35	7300240	SELF TAPPING SCREW	3
36	8564070	WASHER	3
37	7600120	MOTOR DAMPER	3
38	7500150	LOCK PIN	1
39	7500160	SPRING	1
40	0540280	FINE PIN	1
41	7200410	SPEED SWITCH ASSY	1
42	0655890	SCREW	2
43	7600100	MOTOR PLATE	1
44	7600140	MOTOR BELT	1
45	0670760	E RING	1
46	7200130	PULLEY ASSY	1
47	7600080	WASHER	2
48	7600070	PULLEY SHAFT	1
49	7200050	MOTOR ASSY	1
50	7600060	TURN TABLE SHEET	1

No,	P#	NAME	Q,ty.
51	7600020	TURN TABLE	1
52	7600150	STOPPER PIN	1
53	7600130	TURN TABLE BELT	1
54	8563190	NUT	1
55	7200420	PIN JACK ASSY	1
56	7200200	READ WIRE ASSY (BLUE)	1
57	7200160	READ WIRE ASSY (RED)	1
58	7200170	READ WIRE ASSY (BLACK)	1
59	7200150	READ WIRE ASSY (WHITE)	1
60	7200180	READ WIRE ASSY (GREEN)	1
61	7200310	JUMPER WIRE ASSY (RED)	1
62	7200320	JUMPER WIRE ASSY (BLACK)	1
63	8080510	SCREW	1
64	7500170	REAR PANNEL	1
65	7500430	SCREW	1
66	8563220	NUT	1
67	7400500	SCREW	1
68	7400390	VOLUME KNOB	1
69	7500490	SELF TAPPING SCREW	1
70	7200100	P.C. BOARD ASSY	1
71	7200500	SAELD PLATE ASSY	1
72	7200090	CENTER SPINDLE ASSY	1
73	8200500	SCREW	3
74	5023510	SPRING	1
75	7500470	SELF TAPPING SCREW	3
76	7500500	CORD HANGER	1
77	7500050	BATTERY TERMINAL PLATE (S.-)	1
78	7500060	BATTERY TERMINAL PLATE (W.)	2
79	7500040	BATTERY TERMINAL PLATE (S.+)	1
80		CHASSIS	1
81	7500020	INSULATOR	4
82	8564080	WASHER	2
83	7500460	SELF TAPPING SCREW	2
84	7500030	FOOT SHEET	4
85		BATTERY COVER ASSY	1
86	7500370	CHASSIS LABEL	1

FOLLOWING PARTS NUMBER VARIED FROM COLOUR DIFFERENCE.

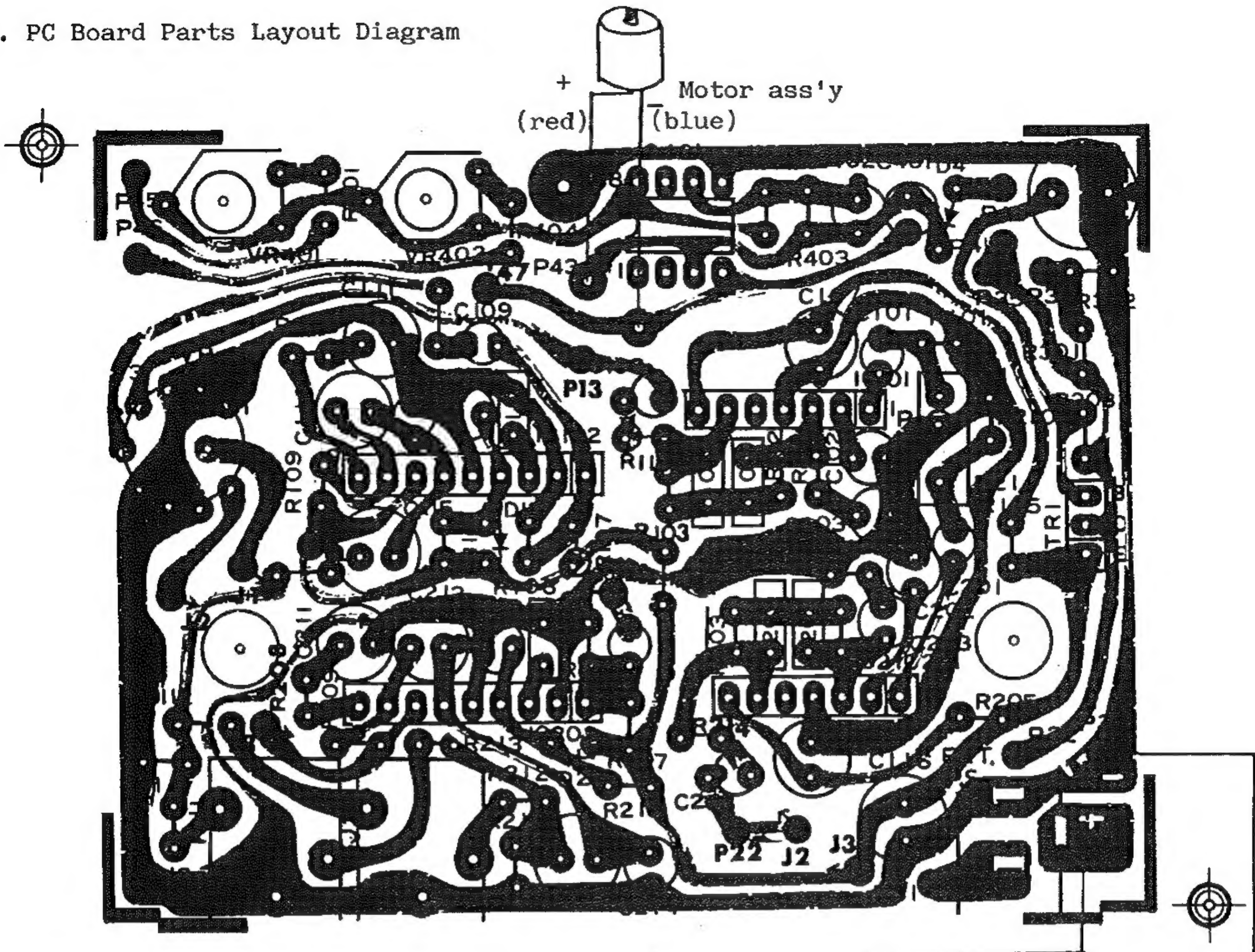
No,	P#	NAME	Q.ty.
1	7200510	COVER ASSY (SILVER)	1
"	7200520	" (RED)	1
"	7200530	" (YELLOW)	1
80	7500010	CHASSIS (SILVER)	1
"	7500510	" (RED)	1
"	7500520	" (YELLOW)	1
85	7200470	BATTERY COVER ASSY (SILVER)	1
"	7200480	" (RED)	1
"	7200490	" (YELLOW)	1



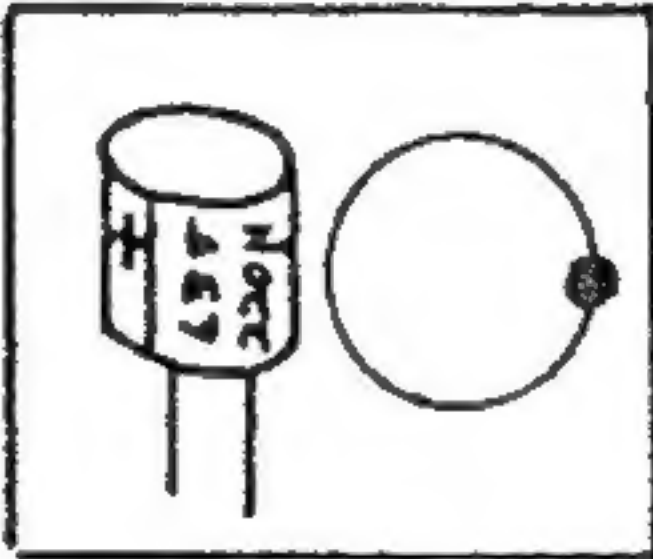




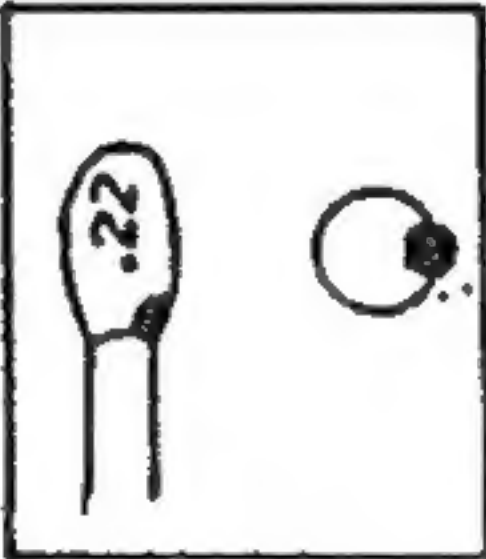
9. PC Board Parts Layout Diagram



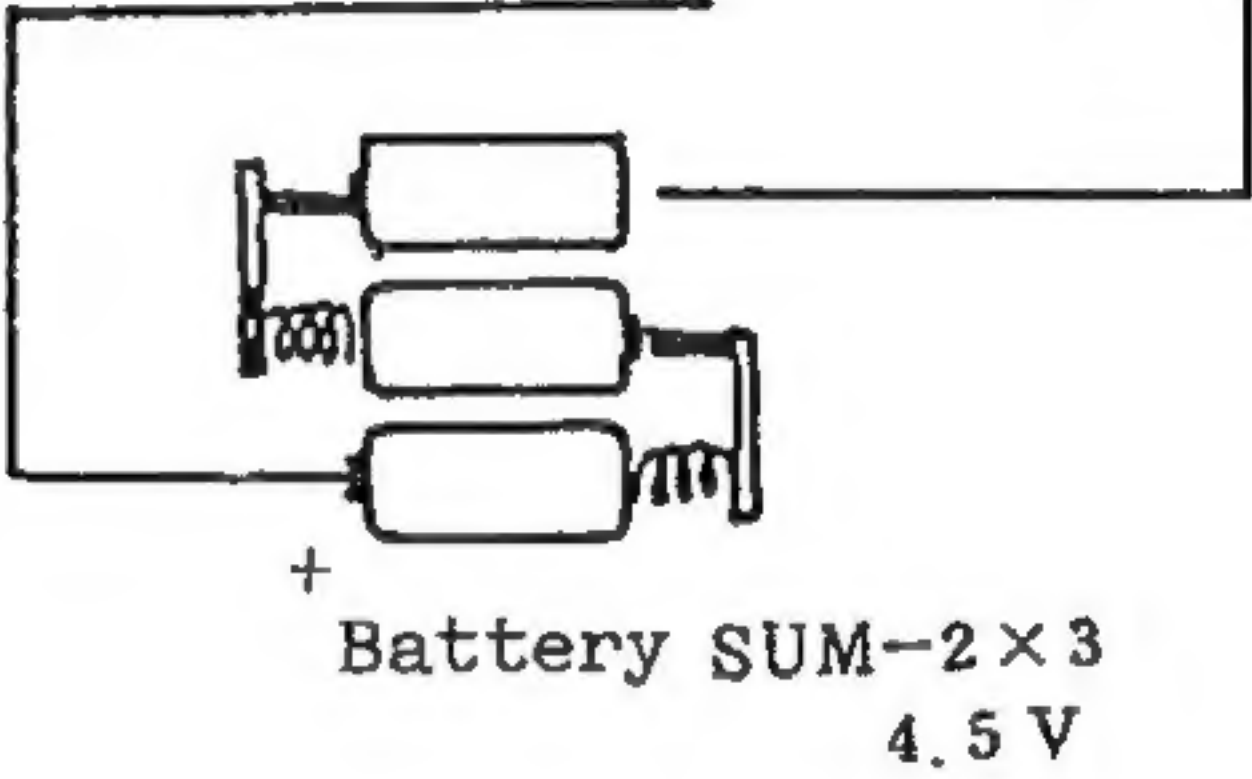
Diode



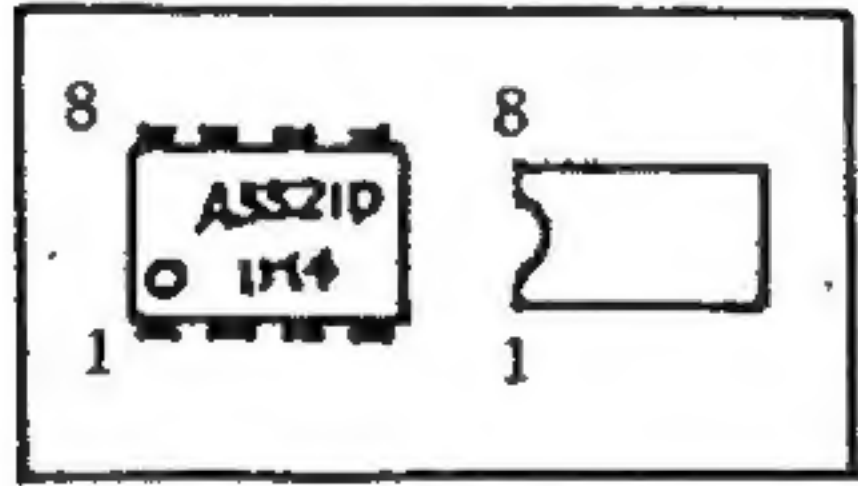
Chemical  
condenser



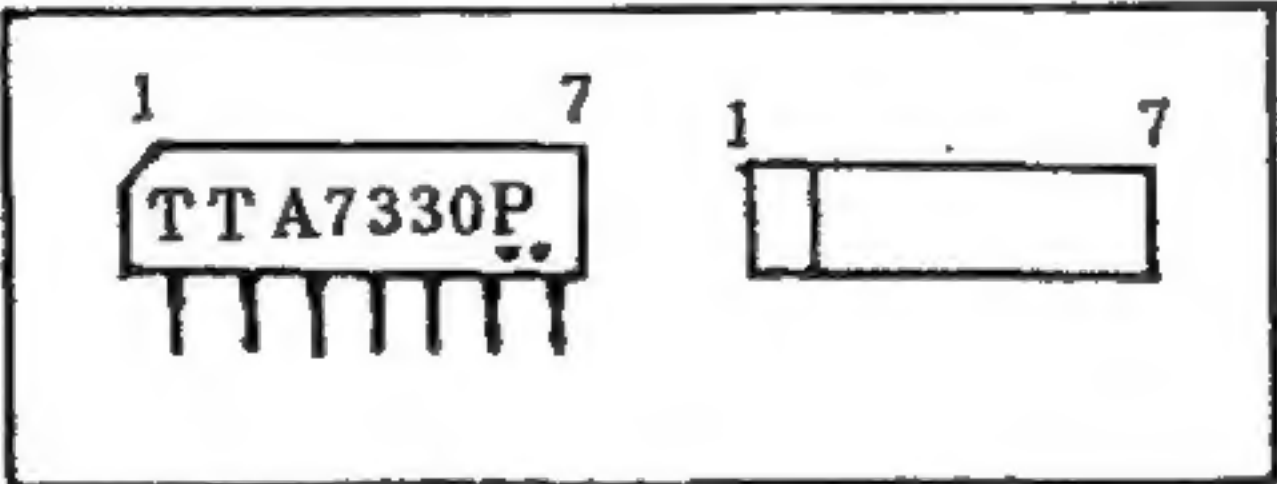
Tantalum  
condenser



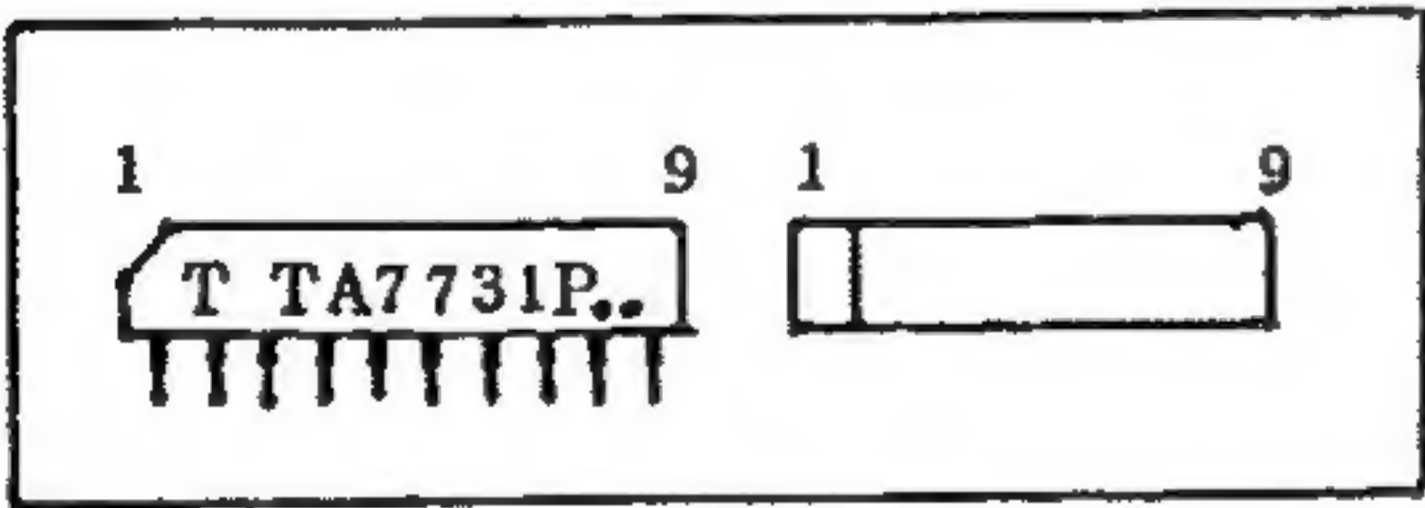
Battery SUM-2x3  
4.5 V



IC401 LA5521D



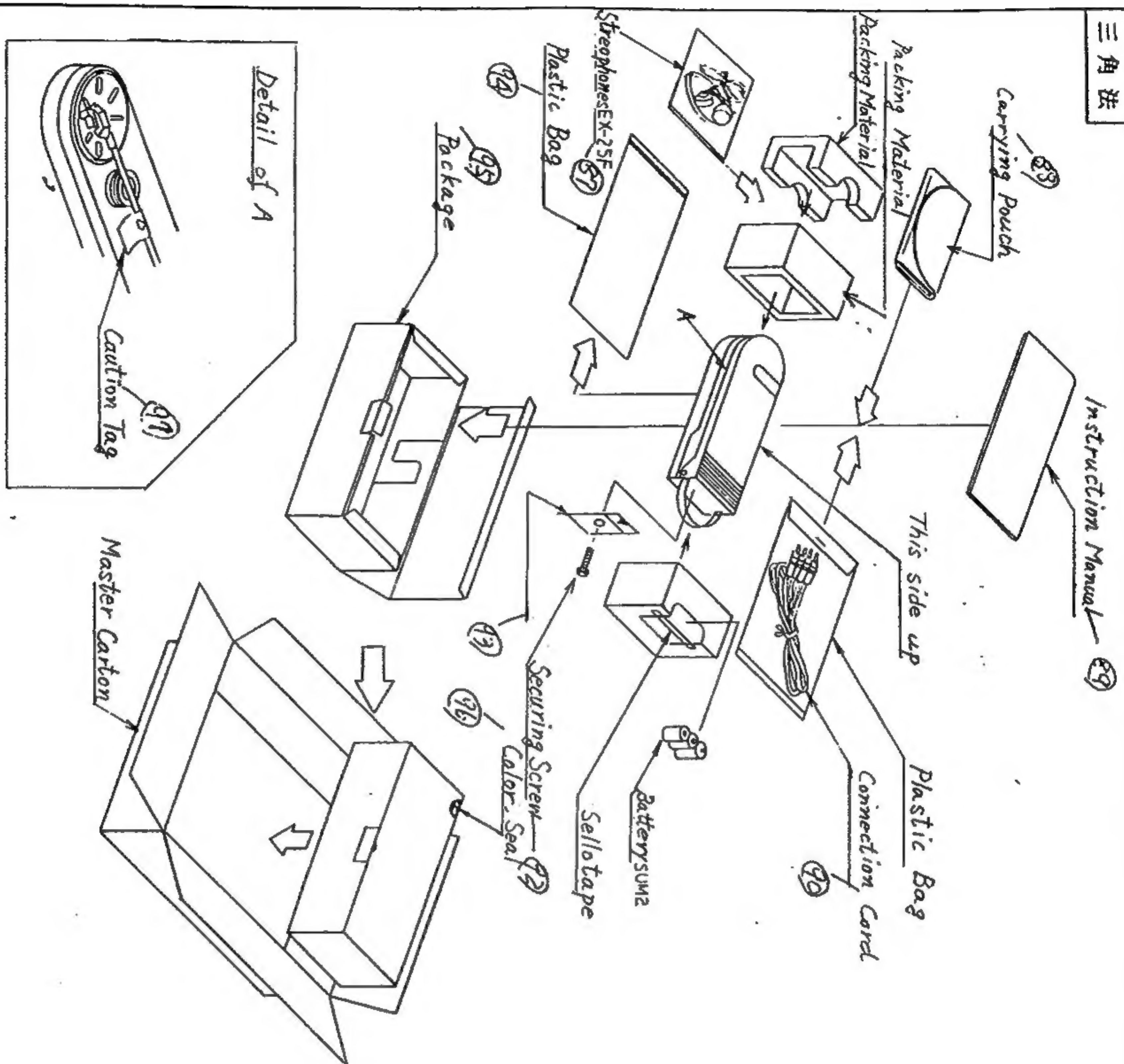
IC101 201 TA7330P



IC102, 202 TA7331P



10. Packing Details



11. Toubleshooting -- Troubles and Remedies

Trouble	Cause	Remidy	Reference Page
No sound	1 Stereophones dead  2 Cratridge dead  3 Tonearm terminal wire broken, or the terminals damaged.  4 PC board defective  5 Power supply voltage insuffic- ient	Replace the ster- eophones  Replace the cartr- idge  Replace the tone- arm  Replace the PC board ass'y  Replace the bat- tery	10   6  4 - 5
Turntable won't turn	1 Turntable belt off, or broken  2 PC board (servo circuit) dead  3 Motor dead  4 Power supply voltage insuffic- ient	Replace the belt  Replace the PC board ass'y  Replace the motor  Replace the bat- tery	4 - 5   7
Too much noise	1 Weariness of motor  2 Elements on PC board deterior- ated  3 Bad connection between tonearm and PC board ground, or tone- arm internal wire broken  4 External induced noise	Replace the motor  Replace the PC board ass'y  Replace the tone- arm   Move the player further away from the TV set, fluor- escent lamp etc.	7  4 - 5  5
Sound skips. Distortion	1 Stylus dirty, deformed or worn  2 Elements of PC board deterior- ated  3 Tonearm won't work properly	Replace the stylus  Replace the PC board ass'y  Replace the tone- arm	4 - 5  5
Too much wow and flutter	1 Turntable shaft worn   2 Pulley worn  3 Drive-belt worn	Center spindle as- s'y should be rep- laced  Replace the pulley  Replace the belt	8



Arm rest won't work.	1 Microswitch damaged, or bad located 2 Fatigue of the lockpin or the spring	Replace the micro-switch Replace the lockpin or the spring	10
No output from AUX terminal	1 Connection cord dead 2 Bad connection between PC board and AUX output	Replace the connection cord Replace the AUX connector ass'y	4 - 5
Won't work with AC adapter	1 EXT power supply terminals dead 2 Insufficient adapter used	Replace the terminals Replace the AC adapter	4 - 5
Cover not locked	1 Lockplate or spring worn 2 Counter spring fatigue	Replace the lockplate Replace the spring	10